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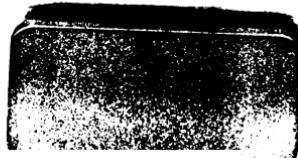
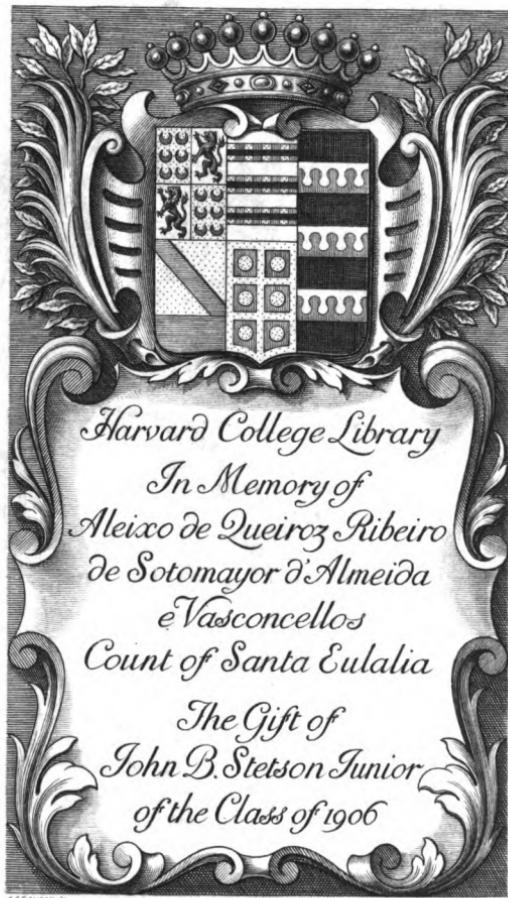


and Coast Defence

MORAES SARMENTO

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THE ANGLO-PORTUGUESE ALLIANCE
AND COAST DEFENCE

THE
ANGLO-PORTUGUESE ALLIANCE
AND COAST DEFENCE

BY
GENERAL J. E. DE MORAES SARMENTO
PORTUGUESE ARMY

TRANSLATED BY
CAPTAIN A. F. CUSTANCE
LATE (XXIX) THE WORCESTERSHIRE REGIMENT

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TO MY FATHER

A. F. C.

P R E F A C E

IT is with much diffidence that I venture to bring before those who are interested in service matters generally, and in our own preparedness for war and coast defence in particular, this translation. There are many points on which I would ask the indulgence of any one who is tempted to read it. In the first place I wish it to be understood that the language and style do not lay claim to any literary merit; I have simply endeavoured to set forth the author's meaning in everyday language. Another point is that, in view of a good many changes having taken place since the original appeared (1904), not only in *weltpolitik* but also in our own home affairs, one or two theories put forward by the author have since that date ceased to apply, or at any rate would require considerable modification. The reader will, however, easily recognize where this is the case.

Portugal has very often in the past, and will undoubtedly in the future, continue to play an important part as regards Great Britain; her harbours have been at our disposal, and her army and navy ranged alongside our own. It may also interest some to know that she has lately been making great efforts to place both her army and navy on a thoroughly efficient footing. The present Minister of War, his Excellency Colonel Vasconcellos Porto, a very distinguished Engineer officer, has done much. During his very active and enlightened administration he has greatly

developed the practical instruction of both officers and men. He has also reorganized the transport and commissariat departments. The infantry and artillery are both at the present moment being rearmed, the infantry with the latest pattern Mauser and the artillery with the most modern Schneider-Canet quick-firers. The Portuguese soldier, though small in stature, is sturdy, intelligent, and excellent material, as his predecessors proved in the Peninsula. It may also surprise a good many readers to learn something of the Anglo-Portuguese Alliance; one does not hear much about it, yet there it is, and there is very little doubt that, should we ever be drawn into any big European war, it would not only become more generally known, but would exercise a very real and not unimportant influence upon our naval strategy in particular. I here wish to tender my thanks to Major Christovam Ayres, a very distinguished officer and writer, professor at the Lisbon Military Academy, and president of the Commission appointed to write the Military History of Portugal, in which capacity he has once more proved his great military and literary talents. To him I am indebted for the following biographical notes on the author, as well as for much interesting and valuable information about the Portuguese services.

General J. E. de Moraes Sarmento, whom I have had the pleasure of meeting, is one of, if not the most distinguished soldier in Portugal at the present day. In the course of his career he has occupied many important positions. He is a Peer of the Realm, and was Minister of War in 1896 and 1897. During his tenure of office capital punishment in the army (during peace) was abolished. He has published many important works on military subjects, such as, "A Treatise on Military Law," "Army Reorganization and a Project for the better Instruction of Private Soldiers," and many others, all of which have been much

appreciated and have exercised a preponderating influence in placing the Portuguese Army on its present efficient footing. He has been commandant of the Royal Military College, where he initiated and carried out many improvements. General Sarmento has also on various occasions been a member of the Cortes. He has been awarded the Grand Cross of S. Bento and Aviz, of which order there are only three other holders; he is a Knight of the Torre e Espada (Tower and Sword), also of the Order of S. Thiago; he has also received the Grand Cross of the Spanish Order of Military Merit and the Gold Medal for Distinguished Service, etc., etc. To him, finally, I owe my best thanks, and would ask him to forgive my poor rendering of his excellent work.

A. F. CUSTANCE.

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THE
ANGLO-PORTUGUESE ALLIANCE
AND
COAST DEFENCE

CHAPTER I

COMBINED ACTION OF THE NAVAL AND MILITARY FORCES
IN NATIONAL DEFENCE

THE defence of a country possessing an extensive coast line, as well as a long frontier, both somewhat vulnerable, presents a problem of the greatest difficulty, which ought to be considered, even in its most minute details, with the broad and general object of securing the safety of the whole country without being led away into by-paths of particularization, and with the sole end in view of adapting the defensive organization in accordance with the urgency and due consideration of the dangers which will most likely have to be reckoned with.

To consider separately the requirements of coast defence, without taking into consideration internal defence, or *vice versa*, constitutes a grave error against the laws and teaching of military science.

Coast defence is but a part of naval defence, and this in turn is only a part of the defence of the country. From which it follows that in the event of war both military and naval operations must be co-operative and co-ordinate. Likewise, supposing a state dependent on its own strength only, to attempt to make it equally capable of resistance at every point where attack may possibly come, may disclose

a grand ideal, but would always be a fruitless labour and liable to be attended by dire results, given the limited military and financial resources of even the richest states, and the great improvements which science and the industries are continually contributing towards the advancement of the art of war. In attempting to be equally strong on land and sea one runs the risk of being weak in both. It must be by the careful study of the separate points which must be considered in naval and in land defence, together with the mutual assistance which each can contribute, as well as the consideration of every available warlike resource in the country, by which a convenient organization for defence can be evolved.

"There are not two strategies, one for the army and one for the navy," says Vice-Admiral Giustino Gonzales in his book, "Modern Naval Strategy and Tactics." There are not; nor can there be but one, as also there can be but one plan of campaign corresponding to the given military and political requirements. The doctrinal principles will have to be adjusted in that plan, according to the resources of population, material and finances of which the state can dispose, and likewise by whatever international ties it can with certainty count upon. From any different mode of procedure only terrible disappointments and grave dangers would arise, for "the errors committed in defensive organization will take many generations to correct," as says that well-known writer on military matters, the Italian General Ricci, professor in the Italian Staff College.

Countries which are entirely either insular or continental have only to study their defensive organization from a single and restricted point of view. The problem presented them is comparatively easy to solve, and it follows they cannot be taken as examples by peninsular countries. In the latter the question of defence ought not and cannot be considered separately, that is, taking military and naval defence as totally apart one from the other. On the contrary, in order that the solution aimed at be sound, it is imperative that the terms of the problem set forth should include the two hypotheses of

COMBINED ACTION OF NAVY AND ARMY 3

the country being the object of a simultaneous attack by a naval force operating against its coast, and by an army invading its frontiers.

For such an emergency, however, even the richest nations are not entirely prepared. Naval supremacy does not as a rule go together with great strength on land, especially in modern times, when both navies and armies have become so expensive, and it is precisely to counterbalance such inequalities that alliances are contracted. The weak points of one party will be balanced by the strength of the other, so as to avoid the scattering of strength at every threatened point; which has always been in war a fruitful source of disaster. Jomini, by saying, "Pour tout conserver il est inutile de tout couvrir," taught a sound lesson, which has always been borne out by history, and which should never be forgotten by the nations of Europe.

These principles of incontrovertible generalities apply with special force to this country (Portugal), on account of the particular circumstances in which we find ourselves. Our country forms a rough rectangle, with 1000 kilometres of land frontier and a coast line of nearly 800; having at its greatest width only some 220 kilometres, and possessing for a neighbour a country which is considerably more powerful, it is evident that Portugal's defensive system must have, as a fundamental basis, the concentration of the whole of its strength only at those points which are considered of real strategic importance.

For the reason that our frontier numbers a great many points by which an invader might come, it would be impossible for us even to dream of constructing, at each one, works to repel him. In like manner because on our coasts there are many points which would be suitable for an aggressor, yet we cannot contemplate preparing them all for defence. In both cases the reason is easily explained by the words of Jomini quoted above. But with respect to our coast defence, there is one other and a special reason, which counsels consideration on the above principles, and that is the recent ratification of the Anglo-Portuguese Alliance.

CHAPTER II

WHY ALLIANCES ARE NECESSARY

THE construction of defensive works, not counting the entrance to Lisbon, at the mouth of the Douro, at Leixoes and at Lagos, has been publicly and officially put forward as a means of increasing the value of our alliance in the eyes of a naval power. This evidently referred to Great Britain, but the Anglo-Portuguese Alliance being now an openly acknowledged fact, it is difficult to understand how the value of this alliance would be either increased or decreased by any fortifications which we may or may not construct at indefensible localities, or at localities of such absolutely secondary importance in any great naval war. Alliances are contracted either by reason of the military strength of each one of the contracting parties, or on account of other considerations, into which political and economic reasons enter considerably. In either case it will not be the construction of one or two works at points without any strategic importance which will bind the contracting parties more closely.

For the solution of those great problems in international politics which are being, or may have to be, considered by the great powers, and with which are connected the particular interests of the two countries forming the Iberian Peninsula, it would be of the greatest advantage to Great Britain to be able to count on a solid base of operations in Portugal for subsequent eventualities. And, in the struggles which that power may have to face in the future with other naval powers, it will be of equal advantage to it to possess the use of certain harbours in our possession for the sheltering,

coaling, and victualling of its squadrons, the most important being Lisbon, Horta, and St. Vincent, situated as they are at the corners of that noteworthy triangle of naval strategic importance in the Atlantic.

These, indeed, are the true causes which heighten the value of the Anglo-Portuguese Alliance, from Great Britain's point of view only, however.

By reason of the exceptional advantages presented by the harbour of Lisbon, in the event of a naval conflagration, its occupation becomes absolutely imperative to England, that having been already demonstrated by the part played by Lisbon in the military operations in the Peninsula at the close of the eighteenth and beginning of the nineteenth centuries. On the occasion of the expedition to Portugal in 1797, the first act of our ally was to substitute by her own our governors and garrisons at the forts of Bugio and St. Julian,* and later on, when she found the port already occupied by the French, she made it her first duty to become mistress of it.

When Wellesley landed at Buarcos on 1st August, 1808, the greatest efforts of the two generals, Bacellar and Freire de Audrade, did not turn the future conqueror of Napoleon from his determination of clinging to the coast and persisting in his purpose, *i.e.* the immediate occupation of the capital; and this fact remains well in evidence in one of the clauses of the Convention of Cintra, dated 31st August of the same year, which says: "The forts of St. Julian, Bugio, and Cascaes shall be occupied by British troops, *as soon as this Convention be ratified*," whereas "the fortresses of Elvas and Almeida shall be handed over *when the British are able to occupy them*." Lisbon was then already the only point in the Peninsula which claimed the greatest attention of the British. The Azores, and particularly the harbour of Horta, on account of its geographical position and by reason of the improvements recently carried out there, likewise occupy a very desirable naval position. That harbour, situated as it is approximately equidistant from Europe, Africa, and

* At the mouth of the Tagus.

America, is of the greatest importance as a base and port of call to navigation. Facing south-east, and sheltered from the north by Espalamaca, and to the west by Mount Carneiro, in the angle of which lies the fortress of that name, sheltered to the south by the mountain of the Guia and by the isthmus of Mount Queimado, it presents the greatest advantages. But as if these advantages were not sufficient, the situation of the islands of St. George and Pico facing it, both mountainous, the latter majestically so (its summit rising to a height of some 2,322 metres), and which are only some seven kilometres distant, complete the sheltering advantages of that magnificent harbour, even lately enhanced by the construction of a breakwater to the west of the town, built on a series of reefs facing Mount Queimado.

Thus the bay presents a sheltered area of 215,000 square metres, which would afford shelter to some 80 vessels of the greatest tonnage. Porto Grande, in the island of St. Vincent, which a distinguished naval writer considers of "decisive importance in the destiny of the Portuguese nation," consists in like manner of a vast bay, to which the island of St. Autaõ serves as a breakwater; it affords splendid anchorage, and is easily entered either by day or night; it is thus one of the best harbours to be found in the Atlantic, having become an obligatory port of call to shipping proceeding to South America, South Africa, and the Pacific, notwithstanding the competition of the Canary Islands. It is sheltered from all winds except the N.W., from which quarter, however, it very rarely blows; it is therefore a very safe harbour in spite of the ground swell which is usually encountered, especially in the calm periods, when to the gentle breezes from the N.W. are added the terrific squalls from the N.E. coming down from the mountains on that side of the bay.

Nevertheless, during the year 1899 never were the enormous number of ships calling there prevented from coaling on account of the state of the sea. And, that one may judge of the traffic passing there, it will suffice to state that the amount of coal imported rose from an annual average

of 231,977 tons from 1890-1899 to 523,229 tons in 1900, on account of the war in South Africa.

Referring to the maritime importance of Porto Grande, St. Vincent, Sr. Perreira de Mattos, in his book already quoted, says: "From a strategic point of view the position of Porto Grande is truly worthy of notice, especially for privateering; the number of navigation routes which pass close to the island and between it and the coast of Africa are very many. The port of St. Vincent is of inestimable value in the destiny of the Portuguese nation. It is enough that it is an obligatory port of call for shipping between Portugal and Brazil, and between Lisbon and the African colonies, for it to be kept at all costs.

"Then, also, taking into consideration that it is the principal refuge for Portuguese shipping in the Atlantic, and that securing for us communication with the African colonies, it forms with Lisbon and the Azores a unique base for privateering, it will be seen that its defence by Portugal is absolutely necessary. To allow such a point to continue unconsidered, as it has been up to the present, would indeed be the height of folly."

If what has already been said were not sufficient to heighten the value, more than any fragile fortifications at the Duoro or Lagos, of the Anglo-Portuguese Alliance, there are yet other naval points in our possession which have always excited the jealousy of the British lion, over and above those already named. Without counting the much-envied East and West African ports, take the island of Madeira, whose importance to Great Britain can be appreciated from the following historical facts. During the campaign of 1801 which we were waging against France and Spain, a British squadron under the command of Commodore Bowen, carrying a landing party of some 3000 to 4000 men under the command of Col. Clinton, arrived at that island, and sent word to the governor that they had orders from the British Government to defend it against attack either by the French or Spaniards, and asking him to prepare barracks for the landing party. After some hesitation this

was done, our ally's first act being the occupation of the citadel.

Later on, 24th December, 1807, identically the same occurrence was repeated. A British squadron, commanded by Sir Samuel Hood, carrying on board two regiments of infantry and two companies of artillery, under the supreme command of Sir William Carr-Beresford, demanded the handing over of the island, which was done on the 26th December, Beresford administering the oath of military allegiance to both civil and military officials, to better accentuate the fact that the island became a British possession. It was by the Convention of 16th March, 1808, that the island of Madeira returned under the nominal dominion of Portugal, actual possession of it only being taken over in October, 1814, that is, a few months after general peace was established in Europe.

These historical facts show the undoubted importance which Great Britain attaches to many of our possessions, and which constitute the strongest reasons why she seeks, and why alliance with us suits her. I can assert, knowing it to be a fact, that in 1801, Lord Hawkesbury gave the following answer to Monsieur Otto, when the latter, in the name of the First Consul, threatened the occupation of Lisbon and Oporto: "If the First Cousul invades the Portuguese states in Europe, Great Britain will invade Portugal's foreign possessions; will take the Azores, Brazil, and will thus procure pawns which in her hands will be of infinitely more value than the Portuguese Continent in the hands of France."

By no one is it doubted that this statement was no mere flight of rhetoric, for at various seasons in those troublous times various of our possessions—Goa for example, and Macao—were also occupied by British troops under the pretext of being protected from the enemy. Great Britain therefore places the greatest value on some of our possessions, and to that fact we must essentially attribute our alliance. It is natural that she should be pleased to see our military strength increased in them, not only that we may more

easily repel any aggression on the part of our common enemies, but to save herself from the scattering of her own forces for their defence. For that very reason, however, it is necessary that fortifications be constructed in localities capable of defence and of real strategic importance, and that the effort employed in such defences be not beyond our powers. From our point of view our alliance with Great Britain has also undoubted military and economic advantages, seeing that we do not possess strength sufficient, by ourselves, to guarantee our neutrality at any time. Portugal must never again allow herself to become the negligible shuttlecock of the contending parties, for it is humiliating to national pride, and sacrifices, at the same time, both life and property, only for the pleasure of calling ourselves neutrals. The humiliating pages in diplomatic history, from the French Revolution down to the fall of the Empire, are indeed sufficiently numerous to shame the national spirit.

If we must lose our nationality through the misfortunes of war, at least let that sad event leave with us the honourable memory of knowing that we took a clearly defined and straight line of action. Backed, then, by the strength of a great naval power as Great Britain is, accompanying her loyally and attentively in the great struggles in which our help, small or great, may be claimed, it is not probable that the above should come to pass, as likewise it is improbable that Portugal, with Great Britain behind her, should find herself attacked, isolated, by any other power, through the cropping up of any question of international susceptibilities or colonial interests. To these military advantages are added commercial advantages, as that country offers a market for some of our most important agricultural products, and a financial support on which we may lean in any future financial difficulties. The advantages of an alliance, which the great and patriotic mind of the Marquis of Pombal thought useful and necessary, cannot even at the present time be denied, considering the special circumstances in which we find ourselves. Only the conditions of the understanding arrived at might cause doubts, but it is hardly to

be supposed that the prudence, the patriotism, and the intelligence of its negotiators should not have gathered from the history of the period referred to sufficient understanding for the elucidation of certain clauses which our old ally has not always interpreted as containing quite the doctrine which we considered necessary for the safeguarding of our just susceptibilities and legitimate interests.

In order that the alliance with Great Britain may be maintained justly and honourably, therefore, and that it may not savour of a distasteful protectorate, it becomes necessary that we should try to firmly establish our defensive organization, not from the point of view of how it may best serve Britain, but on the basis of what in reality presents our greatest capacity of military resistance against direct attack. Frederick II. remarked, and remarked wisely, that "every state erred which, instead of relying on its own forces, relied on those of its ally." Besides there is always a danger in trusting too much to treaties and thereby neglecting one's own military preparations, for not always are they rigidly observed amid political vicissitudes. A noteworthy English writer* says with truth: "Effective alliances signify war, and not the maintenance of abstract principles. War is the only test of their solidity. It is in truth more difficult to carry out the obligations of an alliance with a state which is weak and incapable of resistance, than with one which, being jealous of its independence, shrinks from no sacrifice to safeguard its interests." In his lessons on strategy in the Italian Staff College, Colonel Barone used to assert that, "While victory lasts, the ties of an alliance are not irksome, but when the tide turns, then are alliances put to a hard test. History can produce but few examples of allies who have borne reverses always with equal energy, and who, notwithstanding consequences prejudicial to their own particular interests, have employed every effort to stem and turn bad fortune."

Treaties of this nature are therefore based on the mutual confidence in the power of resistance of the contracting

* Clarke, "The German Strategist at Sea."

parties. In English history itself we find examples confirming this doctrine which ought to serve us as a salutary lesson. By the Treaties of the 9th and 11th August, 1870, entered into by that country with France and Prussia, the continuance of the Treaty of 1831 was confirmed; England agreed to render military aid to Belgium against either belligerent who should violate her territory. Laying before the House of Lords the motives which had guided the Cabinet, Lord Granville said: "We have made clear to the Belgian Government that we wished it to be clearly understood that the responsibility which we were prepared to assume consisted in acting in complete accord with Belgium *and that we counted upon their assistance*, because the only object we had in view was their neutrality and independence." Now, if in a "Treaty of Guarantee," such as that was, England counted upon the assistance of Belgium, her expectations could be no less in her "Treaty of Alliance" with our own country. We ought not to forget the recently spoken words of the German Chancellor, Count von Bülow: "The politician is not a moralist; he only has to safeguard the rights and interests of his country." And it was on the same occasion that he quoted the following words of Frederick the Great, so opportune in our own case: "I shall ever be the friend of my neighbours, but never their slave." Situated in identically the same manner, we hold that our mode of procedure ought to be the same. Let us seal our alliance with England by confidence in our own strength, but placing foremost our own state of defence, in order that we may take pride in being a valuable and leal friend to our ally, but nothing less.

Now a state in a damaged financial condition, such as we are, cannot hope to carry out in its entirety the organization of its defence, paying attention at the same time to the organization of its *personnel*, the construction of inland and coast defences, and of a navy as well. Let us be thoughtful and methodical in the great and patriotic work of national defence. Let us first consider available means, and out of them let us then set to work on military reorganization. It is likewise necessary not to forget the great contemporary

examples which have occurred with nations with damaged finances, which have shown the world at large that the door to the public treasury, in these times of utilitarian egoism, is the one by which the countries' enemies can most easily effect an entry.

If the cordon system of defence of a long frontier has been condemned because, in attempting to safeguard every point, at every point one would remain weak, to attempt with limited means to pay attention to every point in national defence would likewise involve the weakening of the *personnel*, the inefficiency of permanent works, the ships' inability to quit their moorings, and the nation consequently incapable of offering strong resistance against any real danger.

That such a thing may not happen, we must not overlook any circumstance which will help to avoid the necessity of scattering our limited resources ; but concentrate every effort on defences in which our ally can least assist us, and more especially on those which happen to be of equal value and assistance to herself.

CHAPTER III

THE DIFFICULTY OF THE RAPID CONCENTRATION OF BRITISH TROOPS IN THE PENINSULA

ONE of the principal reasons for alliances is the actual feeling of insecurity felt by nations when isolated, by reason of certain international complications. These contracts are therefore entered into with the object in view by each party of balancing their individual weakness by the corresponding strength of an ally. Specially so does this apply to poor countries, who lack resources to carry out simultaneously their defensive organization.

Therefore, if this way of looking at things is admitted to be the correct one, the problem of our defence ought to be considered from a new standpoint, since the Anglo-Portuguese Alliance has been publicly renewed and confirmed. The defence of our coast has by that very fact assumed a less urgent and minor importance, by reason of the naval supremacy of our ally in every part of the world ; particularly since the conclusion of the Anglo-Japanese Treaty it is unlikely that, through future developments, our coast should become the object of important or decisive attack whilst that supremacy lasts. The international situation to-day, from the naval point of view, differs very little from that at the time when William Pitt said : " Not one shot can be fired upon the seas without England's permission."

On the other hand, the situation in which we are placed as regards our frontier, by reason of that agreement, is rendered considerably more important, supposing our neighbour to make common cause with Britain's enemies. That is, from our point of view, the unfavourable aspect of the

alliance contracted by our country, for there is no lack of those who consider that the policy of international isolation is well worth the advantage of being able to proclaim and maintain a loyal neutrality, in the event of a conflagration, an example of which was afforded quite recently (1902) by Denmark, Norway, and Sweden.

In reality, however, this way of thinking is erroneous, because it is not any state which wishes to be neutral that can be so, but only the one which has *sufficient strength* to maintain its neutrality. The truth of this assertion is confirmed by our own history. The lesson taught us in 1762 ought more than ever to be remembered by us at the present time. We then wished to remain neutral, when France and Spain, in their note of the 16th March, invited the Portuguese Government to make common cause against those whom they described as the "tyrants of the seas," demanding an answer within four days. The minister for foreign affairs, D. Luiz da Cunha, replied that Portugal was determined to preserve a strict neutrality, that she had no quarrel whatever with Great Britain, and that she would not therefore gratuitously set aside the purely defensive alliance by which she was bound to that country. To which France and Spain roughly replied, refuting the arguments of D. Luiz da Cunha, and asserting "that the Portuguese would not be allowed to maintain a neutrality which they were incapable of enforcing," and declaring that Spanish troops already massed on the frontier would immediately invade Portugal, and *occupy the ports of that country, in order to prevent the British from gaining possession of them.*

On the 25th April, 1762, the French and Spanish Ambassadors were given their passports and left the country; five days later General the Marquis de Sarria, at the head of the Spanish troops, entered the province of Traz-os-Montes.

In 1793, we once again attempted to preserve neutrality towards France, and at the same time we found ourselves forced not only to incorporate our ships in a British squadron, but also to supply a division with the Spanish forces who were fighting England! By reason of this deplorable

duplicity we lost everything: honour, life, and property. Only our soldiers were able, by their gallantry, to uphold the traditions of our ancestors.

And in later struggles parallel cases have occurred, and it is indeed mortifying to the spirit of a Portuguese to remember the diplomatic part played by us in those times. It is sufficient at this present time to bear in mind that never have we been able to maintain that neutrality to which we have aspired, not even at the cost of the millions which we offered the combatants, the governments of those times, with their doubtful character, thinking that a state which paid a substantial subsidy to one of the belligerents, might be allowed to consider itself a neutral.

Now that the British Alliance has been renewed, the bearing in mind of these facts is very necessary, not only as a justification for that agreement, but that from the sad but eloquent lessons taught by the above cases we may learn to prepare and resolutely adhere to our line of action, whatever the future may have in store. Should any conflict of an international character take place, in which Spain be engaged fighting together with any other power, against Great Britain, the strategic position in the Peninsula would be identically the same as it was in 1762, for the first care of the enemies of the Anglo-Portuguese Alliance would be to "*occupy the ports of this country to prevent the British from gaining possession of them.*"

Between the declaration of war, the departure of the ministers' plenipotentiary, and the initial attempt at invasion, it is possible that not even the five days may elapse which happened when Marquis de Sarria entered the kingdom. The process of the mobilization of armies is in these times considerably shorter, thanks to their better organization and to the progress made by steam and electricity. In that first tremendous effort, which may have to be made, our country, in order to stem the tide, ought only to rely upon its own *personnel* and *matériel*. But even further, during the first period of the campaign, which may be protracted, she will have to stand by herself in preventing the enemy from

overrunning the frontier and substituting her standards for our own on the ruined ramparts, to-day absolutely undefended, which in other times were the bulwarks of our independence. The situation is not very pleasing ; at the same time it is not hopeless, as long as there is faith and patriotism, and above all, the gravity of the situation be not hidden by optimistic illusions. If the country is told the truth she will know how to face the dangers which may threaten her sovereignty.

There are various reasons why, in the event of such a war, we should not be able to count on outside help against an attempted invasion in the initial stage of hostilities : one of them being that the width of the country is extremely limited, and the distance by sea which separates us from our ally very considerable ; another, that the sea itself is not absolutely free from unexpected attacks, and also on account of England's mobilization on land being extremely difficult and slow.

For the explanation and elucidation of the causes which will delay and render difficult the concentration of British troops in the Peninsula, we will by following in order the different operations which must be gone through before this could be accomplished, have progressed with a certain methodical sequence, which should be the most convenient to fully explain the subject under consideration in this book.

It is pretty generally known that the mobilization of the British Army is not based on similar principles to those in vogue in continental countries, by reason of the different organization of her forces.

Since the scheme of December, 1875 (Mobilization of the Forces), various measures have succeeded each other attempting to place mobilization on a better basis, the authorities being convinced that the existing system was not all it should be. Such attempts at reform, always considered by the best judges as the merest patchwork, on account of their not daring to strike at the root of the evil, *i.e.* the recruiting question, have always without exception justified in practice the misgivings with which their introduction has been received, one measure following another

without the appreciable improvement of the acknowledged failings. There is no attempt at disguising the numerical deficiencies of the British Army, even by those to whose apparent interest it would be to hide them. The *Times*, in a series of technical articles towards the end of the present year (1903), asserts that the two army corps destined for a "striking force" according to present organization in case of a continental war, exist only in official documents; whilst as regards reserves capable of mobilization it asserts: "Notwithstanding the efforts which are being made, will for a long time be insufficient."

And the *Morning Leader*, commenting on the above words, says the situation can be compared to that described by the Duke of Wellington in his despatches in 1804, when he said that every one insisted on the necessity of organizing an army worthy of the name, but that none wished to undertake to do it. Similar assertions cannot be taken as exaggerated considering that in the utterances in the Houses of Parliament, not only by the late Minister of War, Lord Lansdowne, but by the actual Under-Secretary of State, and by official documents which have been made public, it is clear that even two years ago the regular forces, with their respective reserves, had not reached the regulation standard, the Regulars being 30,000 men short, the Militia 27,000, and the Volunteers 40,000.

It is the system of voluntary enlistment, upon which is based the constitution of the British Army, which is revealing by the above figures the decadence and futility of that form of recruiting. As a result of this situation, a certain current of opinion favouring some form of obligatory service, at any rate in the auxiliary forces, has appeared in the public press. This has, however, not met with approval by either of the two great political parties which in that country are alternately in power. In 1898, referring to this subject, the Under-Secretary for War said: "The first question which I wish to submit for the consideration of the House is, how we can increase the value of our auxiliary forces. The subject has greatly preoccupied public opinion;

well-known writers, who carry with them a certain authority, have urged the Government to institute a modified form of obligatory service. The Government is not disposed to accept any such proposal. . . . We consider it inopportune even to entertain any such proposal, until we have made renewed efforts to develop and organize our military forces in times of peace. Our object is not to upset at the present moment the organization of the regular and auxiliary forces, including the War Office. Nothing could be more foolish at the present moment. Our duty is to face as best we can the difficulties of the moment with whatever means we have at hand."

To this one of the leaders of the Opposition replied, saying that he was much relieved at hearing that speaker repudiate the idea of compulsory service. "I read," he added, "the articles which have appeared in the press on the subject; but is conscription possible in this country? Are there not two reasons which make it impracticable? Firstly, the duty which our troops have to perform in times of peace, *i.e.* garrisoning the colonies, is one which has never, and which can never, be imposed on an army raised by conscription; secondly, the very idea of conscription is distasteful to the character and temperament of our nation, and would result in the loss of that natural enthusiasm which, in such a remarkable manner, induces our compatriots to offer their services to the state in circumstances like the present."

In view of such unanimous opposition displayed by both constitutional parties to obligatory service, and in view of the daily increasing difficulty of enlisting suitable men to complete the effective strength of the army, it can easily be understood that the stop-gap expedients to which Mr. Wyndham referred in Parliament have not, and will not in the future be equal to fully mobilizing the troops with which Great Britain proposes to take part in a continental war.

Moreover, the difficulties of such mobilization increase greatly by reason of more than half the regular army being always either in India, the colonies, or at the naval strategic

points, their relief being carried out periodically by the units from home.

As garrisons are not permanent, it is not the same corps, but garrisons, which go to make up the higher units. To explain more clearly: in case of mobilization a brigade does not consist of certain unchanging units, but of those which happen at the moment to be stationed at certain places. In the Infantry each regiment corresponds to some definite district, which is unchangeable wherever the two battalions of which it consists may happen to be. Its dépôt is always the chief town of its district. In case of mobilization the reservists are called up to those dépôts, and not to the place where the regiments to which they belong are stationed. And as they are always registered at these dépôts, no matter where they happen to live, the confusion thus caused would assume considerable proportions.

By way of example, let us consider any regiment, say the Cameronians, who have had their dépôt for many years at Hamilton in the South of Scotland, their two battalions stationed respectively one at Aldershot in the South of England, the other at Jubbulpore in Bengal. If an order to mobilize were issued, the reservists belonging to that regiment, living in various places in the United Kingdom, would have to proceed to Hamilton, where those belonging to the battalion stationed out of the kingdom would be detained, whilst those belonging to the other battalion would have to travel the length of the kingdom from north to south, in parties of 50 to 100, before they entered the ranks of the unit garrisoned at Aldershot.

The Cavalry have one dépôt only, at Canterbury, whither the reservists of that arm would resort from all parts of the country, and from where they would also be distributed in parties to rejoin their respective regiments.

In like manner the places where enrolled or registered horses would be collected are four in number—Aldershot, Woolwich, Dublin, and Weedon, from which places they would be fetched by men belonging to the various regiments which required them, on receipt of orders to do so. In the

Artillery mobilization is upon a different footing, according to the various branches of that arm. In horse and field batteries reservists rejoin certain batteries, specified without any apparent reason. In mountain batteries they rejoin at Devonport, which is also one of the depôts for garrison artillery. The reservists of the latter rejoin at whichever district they belong to, whilst the reservists belonging to the Engineers and Departmental Corps collect at the permanent depôts of their branch.

Some of the departmental branches of the service are hardly even represented by a "cadre" in times of peace. For example, ammunition columns, mounted infantry, and army medical units have to be absolutely created on mobilization. Articles required on mobilization, such as clothing, equipment, arms, etc., are not kept in the garrisons, but at special depôts, from where they have to be sent: some articles, such as clothing, to the places of rejoining of the reservists, others, such as arms, to where their battalions are quartered.

The above brief description will serve to illustrate the confusion which arises every time that any part of the British Army has to mobilize; but other points must be added which paint the picture even blacker. For as a rule, of each infantry regiment one battalion is in the United Kingdom and another far away; and in some cases both are out of the kingdom, from which it follows that the number of battalions abroad is always greater than the number at home. Hence the necessity of making up brigades consisting of four battalions belonging to four different regiments.* The reservists are not regularly called up for training, which caused Lord Wolseley to state, when Adjutant-General, that their condition was "not at all satisfactory."

Even admitting that this brief account suffices to convince one that such a way of doing things and such a lack of system cannot possibly produce satisfactory results in case

* The author has, I fancy, rather misunderstood our term "battalion," and evidently thinks that they are what we consider "half battalions." A Portuguese regiment (our battalion) consists of two battalions.—[A. F. C.]

of a European conflict, it will do no harm to study their recent working in practice, and to see that such is indeed the case.

The South African campaign furnishes examples worthy of consideration.

Supposing the nature of the correspondence between the Secretary of State, Mr. Chamberlain, and the President of the Transvaal, Mr. Krüger, should have made the two Governments believe that hostilities were imminent, and that they should be prepared for such from a military point of view; it is nevertheless a fact that the British Government only decided on the 29th September, 1899, to mobilize an army corps to send to South Africa, according to what Mr. Wyndham stated in the House of Commons. The proclamation by Queen Victoria authorizing the Minister of War to call out the reserves, and to retain men with the colours, was dated 7th October. The Commander-in-Chief's Army Order, calling up the reservists belonging to the units destined to form the expeditionary force, bore the same date. This force was to consist of—

- 32 Battalions of Infantry.
- 8 Regiments of Cavalry.
- 2 Battalions of Mounted Infantry.
- 4 Horse Batteries.
- 15 Field Batteries (of which 3 were Howitzer).
- 4 Field Companies, R.E.
- 1 Railway Company, R.E.
- 1 Pontoon Troop.
- 1 Telegraph Company.
- 1 Balloon Section.
- 7 Ammunition Columns.
- 1 Ammunition Park.
- 12 Supply Columns.
- 1 Supply Park.
- 1 Field Bakery.
- 4 Auxiliary Companies (Lines of Communication).
- 12 Field Hospitals.

8 Bearer Companies.
4 Permanent } Hospitals.
4 General
2 Hospital Trains.
2 Hospital Ships.

The whole of the troops which went to make up these various units all belonged to the home garrison, with the exception of two battalions of Guards which were at Gibraltar. The whole force represented an army corps with three infantry and one cavalry divisions, numbering 52,136 men, of whom 49,306 should proceed to South Africa, and 2832 should remain at the dépôts.

It is reasonable to suppose that in case of any future international struggle, Great Britain would not, in its initial stages, be able to send to the Peninsula a larger force than this. It is certainly true that in the mobilization scheme of 1892 the Government counted on being able to dispose of three army corps and two cavalry divisions in the event of a continental war.* But in order to raise these forces it would be necessary to substitute many of the garrisons in the Mediterranean and in the Colonies by Militia, an operation which, besides taking a considerable time to effect, would not be very prudent in certain instances. When in 1898 that mobilization scheme was modified in various ways, one of the modifications was the reduction of the force intended for expeditionary purposes to two army corps, of four brigades each. This reduction was brought about not only on account of the difficulties of mobilization to which we have referred, but also on account of that nervousness with regard to a foreign invasion, or an outbreak in Ireland, which England has always manifested when at war. The mobilization in 1899 plainly revealed the desire to denude, as little as possible of troops, the South of England and Ireland. There is no desire whatever to make little of the military worth of our ally by relating the above facts, but simply

* J. Lauth, "L'État militaire des principales puissances étrangères en 1902."

to make clear, without prejudicial optimism, its real value, that we may know what to do for our own safety. And towards this end, the practical study of the mobilization carried out in 1899 ought to afford a valuable lesson.

Now, in the first place, the full strength required by the organization then proposed was never reached, notwithstanding that it was only one army corps which was being mobilized. The number of rank and file considered unfit for colonial service, either on account of health, or on account of being under 20 years of age, reached a total of 9000, according to the statements of the Under-Secretary, Mr. Wyndham, in the House of Commons. Then again, the number of absentees amongst the reservists called out was considerable, for out of a total of 25,000 only 21,067 presented themselves at the dépôts, which number was further reduced to about 20,000 by the medical inspection on rejoining. Thus the effective numbers which embarked for South Africa were—

1721 Officers.
44,977 Rank and file.
8093 Animals.
965 Vehicles.

These numbers were not sufficient to raise the mobilized units to their war strength.

According to the statements of the above-mentioned Under-Secretary of State the average strength of each battalion was 900 men, which represents a deficit of about one-tenth of the proper strength.

The organization of this expedition confirms Lord Brassey's estimate that 48,000 men, 240 guns, and 1000 sabres would be the utmost which Great Britain would be able to land in a foreign country at one time, and this thanks to her naval supremacy over other countries. It is true that during the course of the war, by appealing to national patriotism England succeeded in despatching to South Africa eight more divisions, each one of approximately the same strength as those first mobilized, but in order to raise them all the regular

troops stationed in the Mediterranean had to be called upon and substituted by Militia. And at home, besides the dépôts, which contained only raw recruits and permanent staffs, there was nothing left but Militia and Volunteers, which could not have been done in case of a European war. There is no doubt that the Militia and Volunteers possess useful qualities, but they can never fully replace regular troops in such an eventuality.*

From which it can be seen that the organization of the British Army, deficient as it is in many ways, would not enable that country to rapidly organize any considerable force to fight on the Continent, which fact has been borne out by history.

When, in 1882, two expeditions had to be sent to Malta and Cyprus, thus to prepare the Egyptian expedition, the War Office issued the proclamations on the 21st July ordering the reservists discharged during the previous two years to rejoin on the 25th.

The first battalion of the expeditionary force embarked on the 30th of the same month, and by the 11th August the embarkation of the remaining troops was completed. Consequently a period of twenty-one days elapsed from the calling up of the recruits to the departure of the last unit of the expedition.

The expedition of 1899 likewise also did not proceed as a whole, but in different batches. The date of rejoining for the reservists being the 9th October, the 1st Division of Infantry was only able to embark on the 20th, 21st, and 22nd October, the departure of the remaining troops extending up to the 17th November, which represents a period of ten days (9th-19th October) for the mobilization of the first units, twelve for the next, and from fifteen to thirty for the remainder.

The two definite cases just stated will dispel any uncertainty which may exist regarding the delay which will occur when the British Army mobilizes. If one also remembers

* J. Lauth, "L'État militaire des principales puissances étrangères en 1902."

that any military expedition, to whatever point on the Continent, could only start from England in a single convoy, duly protected on account of the possibility of being attacked at sea, or of finding the enemy already in occupation at the objective point, likewise taking into consideration the time taken *en route*, the speed being necessarily moderate, it can be taken for granted that at least one month would elapse from the calling out of the reservists to the landing of a British force in the Peninsula. But even this result could only be obtained if other and not less important difficulties, which will form the subject of the following chapters, did not demonstrate the impossibility of England's being able to accomplish such a thing in that time.

CHAPTER IV

CO-OPERATION OF THE NAVY IN AN EXPEDITION BY SEA

SUPPOSING the troops destined to form an expedition mobilized, the next step is the provision of transports to carry them to their destination, and in this the most important consideration is their safety whilst on the sea. In truth, an expedition of a landing force will require a fleet of such a size to carry and protect it that it becomes easily vulnerable, even if convoyed by a numerous naval force. A few actual examples will demonstrate more clearly the truth of this assertion than simple arguments. And we must take them from recent times, since the progress in naval construction, the enormous increase in tonnage, has greatly decreased the number of transports which such an expedition required, even up to the beginning of last century. Even so, such convoys still assume, even in our own times, enormous proportions, as will be shown.

In 1854 the allied forces of Great Britain, France, and Turkey were operating in Bulgaria, when it was decided by the respective Governments to change the theatre of the war against Russia to the Crimea. That change was made by sea. France embarked 27,000 men and 61 cannon, together with their baggage and six days' supplies, on 46 ships. Great Britain embarked 33,452 men and 55 cannon on 88 transports, of which 64 were sailing ships. Besides these 134 ships employed exclusively as stated, others were required for the transport of war material, and these, together with the first lot and with the men-of-war which convoyed them, raised the total number of vessels employed in this transfer to 460.

The British expedition to China in 1860, which Lord

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Wolseley considers the best organized and carried out by England, consisted of 14,000 men in two divisions. The number of vessels which carried this expedition was 120, and the number of men-of-war escorting it, including the gunboats, was 70.

The British expedition sent to Cyprus in 1878, which consisted of 8600 men, was carried in 28 steamships.

In the war between Chili and Peru in 1879, the Chilian expedition of 7000 men to Pisagua, which was only undertaken after Chili had secured the command of the sea, by the capture of the Peruvian ship *Huascar*, was carried in 12 transports escorted by all the available men-of-war. And the second expedition, about the beginning of 1880, which consisted of 2600 men and which disembarked at Pacocha, necessitated 20 transports. When the Chilian Government determined to capture Lima towards the end of 1880, the expedition formed three columns, the first of 8600 men in 17 transports escorted by 2 men-of-war, the second of 3400 men in 8 transports, and the third of 14,000 men in 28 vessels escorted by 5 men-of-war. In the Chilian Revolution in 1891, the Congressionalist army, consisting of 2800 men, 600 cavalry, and 3 batteries of artillery, was embarked at Huasca and Caldera on 15 steamships, and disembarked in the bay of Quinteros.

In the last expedition to Egypt, the British forces consisted of about an army corps of 35,000 men. For the transport of these troops from England, from the Mediterranean, and from India, 124 transports were employed.

The Japanese expedition which on the 24th October, 1894, landed in the Peninsula of Port Arthur, to the strength of 25,700 men, 2 batteries, and 12,900 coolies, was carried in 25 men-of-war and 16 torpedo-boats.

The Japanese expeditionary army which operated against Wei-hai-wei, consisted of 24,000 men, 42 guns, and 13,000 coolies, starting from Talienwen, in three naval columns, with an interval of one day between each, the first consisting of 19 transports, the second of 11, and the third of 20, making a total of 50 vessels.

General Shafter's expedition, which consisted of 16,375 men, was carried on 35 ships escorted by 3 gunboats whilst crossing the Gulf of Mexico, and by 15 ships of the fleet blockading Cuba when they neared that island. The ships were carrying many more men than they should have done. For example, the *Pennsylvania*, which could barely accommodate 800 men, carried 1300. And from this cause the troops suffered the greatest inconvenience and hardship, the chief being want of water.

In October of 1899, at the beginning of the war in the Transvaal, the *personnel* and *matériel* of the first force sent out, the organization of which has already been referred to, and which consisted of 1721 officers, 44,977 rank and file, 8093 animals, and 965 vehicles, was carried in 67 ships.

The Russian expedition to China in 1900 necessitated the use of 20 vessels for the transport of 1000 officers, 25,000 rank and file, and 32,760 tons of war material. Judging from the history of naval expeditions, Admiral Aube says, that for an army of 30,000 men and 3000 horses 36 vessels will be necessary, provided each one of them has carrying capacity for 1000 men or 500 horses. General Brialmont asserts, however, that in practice the number would have to be considerably increased, not only on account of its being difficult to obtain sufficient transports of the size indicated, but also because the Admiral had not taken into consideration the supplies and material which an expedition of that magnitude would require. Our own "Manual of Coast Artillery" agrees with the latter, which considers 100 large vessels necessary for the transport of a force of this size, finishing with this commentary: "The nations who could collect such a great number of vessels for such a doubtful undertaking are few, and they would require considerable time to do it."

The British Admiralty carried out in 1897 (no doubt already considering the possibility of a war in South Africa) various experiments and calculations with a view to ascertaining the number of transports required to carry an

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expeditionary force, basing its calculations on the above-mentioned examples. Firstly, it was supposed that the force should consist of one army corps of three divisions of infantry and one of cavalry, with the necessary troops required to safeguard the lines of communication, the whole making up the following:—

	Personnel.	Animals.	Vehicles.
1 Army Corps	35,087	10,131	1736
1 Cavalry Division	6,700	6,677	454
Lines of Communication	11,959	3,278	401
 Total	 53,746	 20,086	 2591

Excluding war material and supplies, the number of transports required to carry the various component parts of this expedition were calculated as follows:—

	Ships.	Tonnage.
1st Division	19	65,455
2nd Division	19	61,828
3rd Division	18	63,451
Divisional troops	21	69,313
1 Cavalry Division	30	121,575
Lines of Communication	27	75,490
 Total	 134	 457,112

The number of transports was calculated in accordance with the vessels which the Admiralty could count on at the time the calculations were made. But it is clear the numbers will increase or decrease according to the tonnage of the vessels employed. Taking, however, these numbers as a fair average, it is clear that an enormous effort is needed for such an expedition, even by a nation with naval resources like Great Britain, if one reads and ponders the following commentary made by Colonel Furse: * "The Mercantile Marine may perhaps, but not without a certain effort, be able to furnish the ships necessary for the transport of such an army. The first army corps may be reinforced by a second, and, if the theatre of war be not very distant from our shores, the same transports may be used to carry

* Col: G. A. Furse "Expeditions militaires d'oute mer."—[Translation.]

it. In any case, the collecting and preparing of the vessels required to transport even the first expeditionary force will in itself strain all the energies of the Admiralty's Transport Department."

Major Albert Cavaciocchi, of the Austrian General Staff,* asserts that France could not in two months, even by interrupting her commerce, collect sufficient ships to embark 50,000 men at the outside, this estimate being confirmed by Degony,† who puts the number at between 50,000 and 60,000 men as the utmost which that power could embark for an expedition across the sea. When the expedition to Madagascar was undertaken, the Government was obliged to charter British ships, not being able to obtain sufficient French vessels.

It is calculated that an army corps, with one month's supplies and its requisite material, will require a number of ships with an aggregate of 116,000 tons.

The "Memoriale per l'ufficiale di Stato maggiore in guerra" is more modest, for it considers 60 vessels, from 1000 to 1200 tons, sufficient to carry an Italian army corps.

These various examples clearly show that an important military expedition demands, nowadays, such naval resources that even first-class naval powers can only accomplish it with great difficulty and sacrifice.

Admiral Sir William Mends, who for many years so ably directed the Transport Department at the Admiralty, stated in a conference on naval expeditions, "that he realized more and more each day that Great Britain was not prepared to carry them out with precision and rapidity, on account of not possessing the necessary materials."

It should be noted that, up to the present, only the number of transports necessary to carry a military force to its destination has been considered. But beyond this the naval *matériel* required to effect its disembarkation rapidly must be considered. Usually, as will be seen, landings are effected on an open coast, undefended by fortifications

* A. Cavaciocchi, "Dalle Alpi o dal Mar?"—[Translation.]

† Degony, "Etudes sur les operations combinées de terre et de mer."

because the time required to silence them would remove the element of surprise, which is one of the factors conducive to their success. For the same reason, inhabited localities and ports are avoided, which renders it necessary that all *matériel* required to effect a landing by all the component parts of the expedition must be carried with it.

This *matériel*, which must be carried both by the men-of-war which form the escort and by the transports themselves, are the following:—

(a) Steam launches, which to-day are carried by all men-of-war, but which few merchant vessels yet carry, for use in towing other launches.

(b) Launches and boats, which all vessels carry, and which are usually employed in carrying the *personnel*.

(c) Flat-bottomed boats and pontoons, which must be carried both by the escort and by the transports; for landing animals and *matériel*.

(d) Flying bridges, which must be prepared on special plans, and which ought to be carried on the vessels forming the vanguard.

The composition of this *matériel*, in order that the disembarkation may be effected promptly, is an undertaking which cannot be accomplished without some difficulty and careful calculation, so as to avoid omissions and dangerous confusion in the hour of need.

Having thus an idea of the large number of ships necessary for the conveyance of a naval expedition, with its accompanying paraphernalia, it will next be seen that other considerations of no less moment arise, to show the enormous difficulties and dangers which accompany the movements of convoys of such size, if they be not complete masters of the seas over which they must travel to reach their objective.

They will become apparent more especially when one considers the order of procedure which is usually adopted by convoyed naval columns, and the enormous area of sea covered by them.

CHAPTER V

DIFFICULTIES AND DANGERS ATTENDING NAVAL EXPEDITIONS

THE transports which are destined to carry the troops, being collected, it is usual to divide them into at least two columns. In each of these, whatever may happen to be the prescribed formation, the vessels in each file must proceed at some given distance or interval, usually some 400 to 500 yards, so as to avoid collisions. Between columns the distance should not be less than 1000 yards.

The Italian Post-Captain de Saint-Pierre, professor at the Higher Naval College, estimates the area taken up by an expedition consisting of 60 transports escorted by 8 battleships, 8 cruisers, and 16 torpedo craft to be 50×32 kilometres. Bride, a captain of the French General Staff, has drawn another plan in "Notions sur les opérations combinées de l'armée et de la flotte," for an expedition composed of 40 transports escorted by 9 battleships, 4 cruisers, 4 scouts, and 3 despatch boats, which makes the area covered 10×7 kilometres. In General Shafter's expedition, from Key West to Cuba, the transports moved in three columns at 1000 metres interval, the vessels in each being 600 metres apart.

The Italian Colonel C. Airaghi estimates the frontage of a convoy carrying one division as three miles, and of that carrying an army corps as six miles.

These figures are sufficient to show the enormous area covered by a convoy and the difficulties which will beset the men-of-war escorting it, all the greater because they must not keep so close as to run the risk of involving the convoyed vessels in any action they may have to fight, nor

must they be at such a distance as to unduly open the meshes of the protective net which they should form round the transports.

Besides, as the convoy will necessarily consist of vessels requisitioned how and where possible, it will therefore contain the most heterogenous elements. Some may be able to steam 25 knots an hour, whilst others may only be able to accomplish 10. The rate of progress will naturally have to be adapted to the slowest movers. The voyage of General Shafter's expedition, already referred to, lasted a week, with both wind and sea favourable. There is therefore no doubt that many favourable opportunities would present themselves for a fast and daring squadron to attack such a hybrid, cumbersome, and slow fleet. Saint-Pierre considers that notwithstanding the mastery of the sea being in the hands of the attacking party, it will be almost impossible for him to avoid suffering damage at the hand of destroyers. Armed as the vessels are with every means of sinking any merchant transport, they might inflict grave losses on the expedition by attacking and sinking vessels, or at any rate delay their progress and disembarkation. Another distinguished Italian writer, in speaking on the same subject says: * "Under actual considerations of naval tactics, it would indeed be difficult for the French, notwithstanding their great naval superiority over us, to risk an attempt at landing on our shores, without having first beaten or blockaded our fleet."

Another author † frequently quoted by the best naval writers, says: "Before all else, let us consider the greatest danger which threatens us by sea: that of a considerable landing on our shores. Very well, as long as the enemy fears seeing his convoys surprised at sea or during disembarkation, by our powerful cruisers, by our torpedo-boats, and by our heavier war vessels, he will not attempt any considerable landing. It is necessary to realize that a convoy carrying 60,000 men must consist of at least 180 to 200 steamers.

* De Bormida, "La Difesa della nostra frontiera occidentale."

† Paolo Cotran, "L'ordinamento strategie della nostra marina."

Now, as such a convoy covers many square miles, it can only move slowly ; it will have to struggle with infinite difficulties to keep concentrated, to come to an anchorage, to overcome bad weather, and to land all material successfully. Not very much time would be required to land 30 or 40 battalions of infantry, if the weather and place were favourable. But to land artillery, horses, vehicles, etc., is quite another affair. For this, it is not a question of hours but days which becomes necessary. Then, supposing the army corps landed, the lines of communication with the base of operations must be safeguarded, for, if not, famine, and want of supplies in the parks, will come, etc., etc.

“ Now, if we possess a good many useful cruisers, and many torpedo-boats ready to surprise the convoy and to cut off its retreat, and if the main body of our fleet should be fit to go into action, we would inflict on the enemy, notwithstanding his escort, such a blow that it would not be forgotten by future generations ; because a convoyed squadron loaded with troops, weighed down by war material, is indefensible against fast cruisers and torpedo craft which assail it. Besides, it is well known that nobody would dare undertake a large landing expedition before making themselves absolutely masters of the seas, that is to say, before having driven away the cruisers and destroyed or blockaded the fleets.”

The protection of such convoys is all the more difficult whilst in transit, because it is not necessary for the enemy to be in naval superiority in order to make an attack upon them. A few vessels directed against them with high speed, and who boldly attempt by the use of gun, ram, and torpedo to disorganize them, would probably be enough to attain the object. Even supposing that a few ships may be lost in such a manner, the damage caused to the enemy is worth the sacrifice, especially if the attacker has the advantage of a coast line from which he can easily undertake the operation.

Perruchetti, an old professor of the Italian Staff College, who is to-day a general, referring to this subject, wrote : “ The difficulty of protecting a large convoy from the onslaughts of

very fast torpedo-boats, and against the rams of fast vessels, especially against vessels such as the *Duilio*, the *Dandolo*, and even the *Italia* and *Lepanto** is such that one must consider it temerity on the part of an enemy to attempt an expedition by sea before having cleared it of those dangerous vessels of ours, which Cottran calls 'our hunters of convoys and squadrons.'

Admiral Fincati is equally emphatic: "An escort of men-of-war, even if powerful, could not save the convoy; for the main body of the attacker could engage the escort heavily, whilst two or three fast vessels with rams could throw themselves amongst the convoy and inevitably destroy it."

Our own colonial history confirms the truth of these examples.

During Brazil's struggle for independence, when Bahia was the only point left in the hands of the Portuguese, their garrison was in a critical situation, being strongly attacked on the land side and threatened from the sea. On the 2nd July, 1823, General Madeira embarked his troops, which numbered some 3000, on 13 men-of-war and 71 merchant vessels. This large convoy started for Lisbon, Admiral Pereira de Campos employing every effort to protect it with his best ships. Unfortunately, on the very next day following their start, the Portuguese squadron was met by a hurricane which scattered many of its ships. The commander of the Brazilian squadron, Admiral Lord Cochrane, who had followed the expedition, then gave orders for the greater part of his force to give chase to the scattered vessels, whilst he himself on his own ship, and one *corvette*, continued to follow the main body of the convoy. When this chase was abandoned, nearly the whole of the transports, besides a Portuguese man-of-war sloop, had fallen into the hands of the Brazilians.

Even more eloquent, however, than this, or several other examples which could be given to prove the theory set forth by the writers we have quoted, are three cases which for the British carry decided importance, because in them took part their most distinguished admirals, who, with consummate

* Old 1st class battleships, nowadays rather out of date.

skill, took advantage of the same kind of misfortunes into which their adversaries had fallen.

To take them in their right sequence, let us first consider the case of the "Invincible Armada," organized in Lisbon by Philip II. of Spain and I. of Portugal, with the object of conquering England, and to which we shall again refer later on. For the realization of that great undertaking a plan was evolved which was based on the organization of two expeditions: one prepared in the Netherlands by the Duke of Parma, to consist of 13,000 infantry and 1800 cavalry; the other, which actually was collected at Lisbon, consisting of 130 ships, totalling 57,868 tons, carrying 2431 cannon, manned by and carrying 30,000 men. This famous expedition started on its voyage on the 30th May, 1588, sailing northwards with the intention of entering the Channel and anchoring at Calais, where it should effect a junction with the Duke of Parma. The ships at the disposal of Elizabeth of England were indeed few and small, but the sailors by whom they were manned were courageous and their captains daring, as Drake had just previously shown by his audacious attacks on Cadiz and Lisbon, which delayed for a year the start of the Armada. Thus, during the night, Admiral Lord Howard was able to get amongst the huge convoy which carried Philip II.'s troops, setting fire to some of the vessels and sowing panic and disorder amongst all the others.

After a series of fights, in which the British always had the advantage, a storm completed the work of destruction, casting many ships upon the coasts of England and Scotland, and absolutely frustrating the object for which the "Invincible Armada" was intended.

The second case happened in 1747, when the French prepared a squadron of six men-of-war and four vessels of their East India Company to escort, under the command of Admiral de la Jonquière, 30 transports, carrying troops, merchandise and supplies, and which were intended to split up on the way, some of the merchant vessels proceeding to the East Indies, and the remainder with the troops and supplies making for Canada. On the 3rd of May, one or

two days before the date on which they were to have separated, the British fleet, commanded by Vice-Admiral Anson, came upon them somewhere in the vicinity of Cape Finisterre. The French admiral signalled to the transports to get away, and ordered one of the men-of-war to accompany them, preparing to give battle with the remainder of his ships. In the action which followed, De la Jonquière fought bravely with the object of saving the convoy he was guarding, but the final result was the capture by the British of the whole of his escorting squadron and of one-third of the transports.

The third case took place in 1788, and shows how the same error, made once more by the French, would have resulted in similar disaster had it not been for an unexpected circumstance. Even so the consequences were terrible, as is well known. Napoleon had started from France with 36,000 men carried on 300 transports. The escorting squadron, commanded by Admiral Brueys, consisted of 13-line-of-battle ships and 17 frigates. Nelson was in the Mediterranean with a small naval force. On the 19th June the French fleet started from Malta for Egypt, and on the next day Nelson also made sail, steering a course past Messina. But the French fleet during its voyage approached the European shores, calling at Candy, whilst the British kept over towards the African coast. For this reason Nelson succeeded in reaching Alexandria before Napoleon, but not finding him there, he came back to Sicily to replenish his supplies. In the meanwhile Napoleon arrived at Alexandria three days after Nelson's departure, and landed his troops without any difficulty. But the British admiral returning once more to Egypt, found Bruey's squadron in the Bay of Aboukir, and inflicted upon them such a defeat that only two line-of-battle ships and two frigates were able to reach and take refuge at Malta and Corfu. Only Napoleon's lucky star saved him from the fate of the "Invincible Armada," as he himself recognized, when on board the *Orient*. Reflecting on an encounter with Nelson, and its inevitable consequences, he uttered these fateful words: "O,

fortune m'abandonnerais-tu!" but also when on arriving at Alexandria, he insisted with Admiral Brueys on the necessity of landing the troops at once, in spite of its being night and bad weather, saying: "Nous n'avous pas de temps à perdre. La fortune n'a pas trois jours à nous donner!" As a matter of fact fortune did not forsake him at that moment, but very shortly afterwards that presentiment was being realized. The battle of Aboukir, depriving Napoleon of the reinforcements on which he counted, by severing intercourse with France to such an extent that for months no communication was possible, frustrated entirely that great dream of Napoleon's, which was to mortally wound in India France's traditional enemy.

Major Callwell, referring to this expedition, says: "That daring expedition to Egypt was, perhaps, the greatest strategical error committed by Napoleon in the course of his marvellous career. Many of the mistakes made by the great conqueror, and which are prejudicial to his reputation, can be explained. He was not infallible. Not always was he able to estimate with accuracy the power of resistance of his enemies. But his expedition to Egypt is indefensible." * The truth of this criticism was confirmed by Napoleon himself, later on, in his communication of the 23rd of February, 1798, in which he says: "To undertake an expedition against England, without being master of the seas, is the most daring and difficult operation which could be attempted." † Aboukir had, in fact, been for him a hard but useful lesson. Because, when he began to entertain the idea of a landing on English shores, he made it dependent on a great naval operation, which was to draw the bulk of England's navy far away from Europe, and thus enable him to be master of the Channel for a time. It was only on account of his not having admirals capable of carrying out such a plan that he failed.

The above examples conclusively demonstrate that of all the conditions necessary to carry out a successful landing on

* Callwell, "The Effect of Maritime Command on Land Campaign."

† "Correspondences de Napoleon," Vol. 1.

an enemy's coast, the most essential is to possess over him undisputed command on the sea.*

Although William the Conqueror enjoyed the reputation of being the most skilful general of his time, yet nobody will venture to compare his genius to that of Napoleon. Nevertheless, the Duke of Normandy was able to land his knights and archers on the shores of England, whilst the Emperor, having at his disposal all the military might of France, and many more resources than the former, was unable to accomplish a similar feat. The narrow strip of sea which separates the two kingdoms acted as a more formidable obstacle than the snow-clad peaks of the Alps. The brilliant military talent which enabled him to plant his eagles in most of the European capitals was unable to show him the way to triumph over the wooden walls of Great Britain. What is the reason for this difference? It was that the Duke of Normandy obtained one historical moment in which he found himself master of the Channel, and Napoleon never succeeded in finding himself similarly situated.

From our own times yet another eloquent example can be given, showing the risk run by naval expeditions which have not complete mastery of the seas, which serve them as lines of communication.

On the 24th June, 1866, the Italians had suffered a severe defeat at Custozza at the hands of the Austrians, and Italy made up its mind to make up for that defeat by a naval victory. With this object in view, Admiral Persano was ordered to attack and occupy the island of Lissa in the Adriatic, defended at that time by 88 cannon and 1883 men, his squadron being reinforced for the purpose by a landing force of 2600 men. The admiral carried out his orders, but precisely at the moment when he was commencing the bombardment preparatory to effecting a landing, the Austrian squadron commanded by Admiral Tegethoff appeared on the scene, and although inferior to the Italians, inflicted another defeat on them, and prevented them from carrying out the projected landing. With these eloquent

* Colonel G. A. Furse.

historical facts in mind, it becomes necessary to make a digression in order to consider the actual political situation of two great European powers, always rivals, the better to appreciate the doctrine set forth in this chapter.

It would not seem necessary to possess any very great political foresight to perceive that in the European conflict which looms on the horizon, France and Great Britain will probably once more attempt to settle those conflicting interests, which have so often been the cause of such implacable hatred between the two countries.

The situation to-day is perfectly analogous to that which Charles II. described to Louis XIV. when he said to him: "There are two obstacles to a perfect understanding between the two countries. The first is the great effort which France is at present making to increase her commerce and become a naval power. That fact constitutes to any one who, like ourselves, base their importance on their commerce and upon their naval strength, such a strong cause for touchiness, that every step which France insists on taking on that path will cause a pang of jealousy between the two countries."

With the difference that to that cause for jealousy is now added another no less serious and important, which is the colonial expansion in Asia and Africa of both countries. Fashoda, although perhaps the most serious, has not been the only obstacle which France has encountered in her colonial aggrandizement. On the other hand, Great Britain perceives at every step the intention of that power to embarrass her route to India through the Mediterranean. From which springs the concentrated animosity which very ostensibly divides the two naval and colonial races, and which is annually interpreted in the but thinly disguised plans of manoeuvres of their respective fleets.

Now, supposing hostilities commenced, any one glancing at a map of Europe and considering the care France has bestowed upon the defences of Cherbourg and Brest in the Channel, and upon those of Lorient and Rochefort in the Atlantic, will see without much difficulty that the British

would not attempt to despatch an expedition to the South, from their shores, without having first secured the safety of its voyage by the annihilation of the enemy's fleet, or at any rate making sure of their inaction by blockading them in their ports, and this they can hardly hope to accomplish at the very commencement of hostilities.

In his much-considered work, "Naval Warfare," Admiral Colomb demonstrates so clearly and emphatically the necessity of possessing the command of the sea before attempting an expedition by sea, that it would be inexcusable folly to suppose that the British Government would dare to doubt this lesson taught by one of its most eminent admirals by any practical attempt in opposition to his theory.

Besides which, this doctrine has always been adhered to by the Anglo-Saxon races. During the American War of Independence, when the South found itself hard pressed by the loyal troops, Washington, instead of sending them reinforcements, collected every available means and threatened New York, which was to his adversary a point of the greatest strategic importance, and this he did in the certainty that it would attract thither his enemy's principal forces, and thus relieve the South.*

Explaining this policy to his subordinates, he wrote on 23rd May, 1781, to M. de la Luzerne: "I do not see any possibility of being able effectively to help the Southern States, or to prevent the dangers which threaten them, whilst we remain outnumbered in those seas." On the 1st June he said to General Greene that he was struggling with great difficulties in South Carolina: "Our plans were most carefully considered from every point of view, and it was in the end decided to make an effort against New York, in preference to any operations in the South, because we have not a safe superiority on the sea."

Lastly, on the 8th of June, he wrote to Jefferson the following: "If by any lucky chance we obtain command of the sea, their (English) defeat is inevitable. Whilst our inferiority lasts, however . . . it will be better to help the

* A. T. Mahan, "The Influence of Sea-power on History (1660-1783)."

threatened point, that is, the South, not by any direct expedition of reinforcements, but by creating diversions in other places."

Indeed, this is a principle which is no longer questioned, that operations on land cannot be undertaken whilst the lines of communication are not secure; therefore, if a portion of those lines is across the sea, it is logical that in like manner they cannot be undertaken until the command of the sea is obtained. And as Great Britain cannot carry on a continental war without first crossing the sea, it becomes necessary for her to commence by securing command of it, which command her adversaries will always try to dispute every time a favourable opportunity presents itself. Other nations' history as well as their own has taught them the risks run by an admiral who overlooks this fundamental principle of the art of war.

In quite recent times, during the Spanish-American War, when General Shafter was preparing the expedition to Cuba, it was only necessary for the captain of the *Resolute* to have reported that a Spanish war vessel had given chase to him, for the Government at Washington to give orders to that general to delay his departure, and the expedition was thereby retarded some five or six days.

Such are both the theoretical principles and practical results, both of Anglo-Saxon origin, which, together with fundamental principles of the art of war, condemn the expedition of any troops by sea before the mastery of the seas over which they will have to travel is obtained.

The ties of the Anglo-Portuguese Alliance would not be sufficiently strong to make the cabinet of St. James risk a disaster to its army by violating the principles contained in the above doctrine.

History proves to us conclusively that we must not entertain any illusions on that subject, in the event of a war in the future, for when, in 1798, our Minister for Foreign Affairs asked England amongst other things for the help of Sir Charles Stewart's Division, which had been sent to this country the previous year, the answer was "that England

could not only not assist us with either men, arms, or money, but that she even saw herself compelled to order back from Portugal three of the regiments of that division," which was reduced from 6000 to 4665 men at the very moment when Spain declared war with us.

And we cannot even accuse our ally of breaking faith with us, for by international right the obligation to render help to one's allies is qualified and limited by the exigencies of one's own defence. A state is not obliged to render assistance except if it can do so with safety.

Bluntschili, commenting on this principle of international usage, writes :* "This condition is clearly agreed to in all Treaties of Alliance. A country which finds itself obliged to mobilize the whole of its forces in order to defend its own territory against attack by the enemy cannot commit suicide by rendering help to an ally. The first and greatest care of any government is to safeguard the existence of the state. If it can render help without danger to itself, only then should it assist its friend with a portion of its forces. When my own house is on fire, no one can force me to go and help to put out the fire in my neighbour's."

It is a good thing that we should in times of peace clearly understand the principles of strategy and of international rights, as well as the difficulties of mobilization of the British Army, that we may not continue to neglect our national defence, trusting to the false hope that the prompt assistance and valuable resources of our ally will secure both by land and sea the inviolability of our territory. In the hour of danger the disillusion may be terrible.

In such an eventuality, by reason of the conditions of recruiting, and of the organization of its army, Great Britain could not prepare and despatch a strong reinforcing expedition to Portugal in less than a month, as has been shown, not only by a description of the slow method of mobilization in that country, but also by the actual results obtained in the preparation for the Egyptian and South African campaigns.

* Bluntschili, "Le droit international codifié."

Even for that it would be necessary for her to have the command of the line of communication of that expedition secured, which, as has also been explained, is not probable at the very commencement of a war.

Thus the safest line we can take in considering our defensive organization, in case of a European conflagration in which Spain might be amongst our enemies, is to act on the supposition that at any rate during the first period of hostilities we should be obliged to trust to our own strength and resources.

If, for such an eventuality, we attempted to simultaneously reorganize our men, our *matériel*, our inland and coast defences, and our navy, in view of our slender resources, we should be acting foolishly.

The work of preparing our defence will only become useful when, after having studied the probable ways in which we should be attacked, we can decide on the relative importance of the various resources at our command, that we may prepare them as required.

With that end in view were written the following chapters of this treatise.

CHAPTER VI

ON THE VARIOUS PRINCIPAL NATURES OF NAVAL WARFARE

ALTHOUGH the difficulties which we have described ought to convince us that Great Britain could not render us much help in the initial stages of an invasion on land, it is fortunately quite a different matter should the attack be by sea, for in that case, no doubt, our ally's action would be prompt and decisive.

For this there are two reasons: firstly, the character which modern naval wars assume, and secondly, that command of the sea to which Great Britain aspires, and which has been hers for so long.

The best known writers on naval warfare usually divide into three the character most commonly assumed by these. They are—

- 1st. Actions or battles fought by squadrons.
- 2nd. The cruiser war, which is carried out by single ships or by a few vessels of the same type working together.
- 3rd. Privateering, which is carried out by armed merchant vessels.

There is not much doubt that, in the event of a war, Great Britain would endeavour to crush her adversary, no matter who he may happen to be, by the first of these methods. For this form of naval war is the only one possible for any one whose object is to obtain the command of the sea, as this can only be effected in two ways: either by destroying the enemy's fleet in decisive battles, or in forcing them into their harbours, where they would immediately be blockaded. The principle stated by Napoleon is true both as regards land and sea, that you must look for the enemy in order to

destroy him, and that nothing has been gained until that has been effected. In naval wars carried on by squadrons it is possible to a certain extent to approximately forecast their result, when one knows the relative strength of the contending parties.

And this being so, a careful study of Great Britain's position from a naval point of view ought to help one considerably in making a forecast as to the result of any struggle in which she may take part. Great Britain's interests are upon the sea, and it is only across the sea that her territories can be attacked, and hence the reason why she has never hesitated to make every sacrifice to preserve and secure that naval supremacy which she unquestionably possesses. In 1883 Great Britain was satisfied if she was superior to any one naval power; six years later, in 1889, her aspirations were considerably greater, as stated by Lord Hamilton: "Great Britain ought to be able to balance the united strength of the next two greatest naval powers," and this plan bore fruit in the "Naval Defence Act," the result of which was the immediate increase of the British Navy by 70 vessels.

And in this continual growth, this naval power has continued to increase to such an extent that an Italian writer on naval matters quite recently wrote a book in which he attempted to demonstrate that in reality Great Britain by herself, on the sea, was more powerful than France, Germany, Russia, and the United States put together.

It is, besides, not only on her naval resources that Great Britain bases her strength. It lies as well in strategic considerations. One would be the unity of command which she would possess, and which would not be the case with her adversaries, on account of their forming, as is most probable as well as unfavourable to her, a coalition against her.

Another is the comparative ease with which she can concentrate her naval forces, when one takes into consideration the way the forces opposed to her would be scattered in the Baltic, from the Channel to the Bay of Biscay, in the Mediterranean, the Black Sea, and in even more distant regions. The preparations which she has known how to make for

many years past with a steadfast and clear foresight, providing many coaling stations, establishing and strengthening different bases of operations, laying down and keeping in her possession important submarine cables, all these are likewise important factors contributing towards her strength. But, above all, is the care devoted by Great Britain to the instruction of her naval *personnel*, sparing no expense on their instruction, carefully selecting them, keeping up the strictest discipline amongst all ranks, thus assuring the proven competence with which all ranks, from cabin-boy to admiral, carry out their duties.

Therefore, as far as it is possible for human beings to judge, Great Britain's naval supremacy, even unaided by foreign alliances, ought to be secure for many long years. It is certain, however, that the strides which are being made by other countries will go on making that supremacy more difficult to maintain, particularly as the two principal articles required by navigation, *i.e.* iron and coal, are now no longer a monopoly of Great Britain. From this point of view she has already encountered some formidable adversaries in Germany and the United States, but before these two countries attain the full development which their geographical position will allow them, many years must elapse.

Therefore, in the event of a European war on the lines indicated, it would probably take from the very outset the form first mentioned, that is, great naval battles. "Wherever squadrons may be organized against Great Britain there will be found her own to fight them, and over whatever seas such squadrons may cruise there will always be found a British squadron accompanying them, ever ready either to meet and destroy them in action, or to blockade them," so says Admiral Colomb, to-day one of the most renowned authorities on naval strategy and tactics. It is in that great strategic war that the magnificent harbours belonging to Portugal will be of the greatest value to our ally, and their position and value no doubt contributed greatly towards the confirmation of the alliance between the two countries.

In such a naval war scattering forces would be a mistake.

The great authority on modern naval strategy and tactics,* writing on this subject, says :—

“ The sea, as a field of war, has, in the same way as the land, its centres, and they cannot be overcome by scattering the forces, no matter how numerous they be, over the whole theatre of operations, but by occupying them with united forces, either naval or military, in readiness to act in unison from certain points, in any direction. This axiom is the fundamental principle of war, and is called *concentration*, for the forces are not scattered, but grouped at points which, according to circumstances, are of the greatest importance. Therefore one must base a war on concentration if one would secure an effectual supremacy and an effectual energy in the operations.”

Now, in the first-mentioned form of naval war, landing operations against any country need hardly be anticipated whilst the security of the party wishing to commence them is not assured, either by the destruction or blockading of the opposing fleet.

“ Only after having effectually destroyed or blockaded the enemy’s forces,” says another writer,† “ and conquering the sea, can the mobilization of the defending army be hindered by sea, communication between the islands and the continent cut off, the islands conquered, so as to establish in them future bases of operations, or undertake without danger either small or important operations against the coasts, how, when, and where one thinks fit.”

And Admiral Colomb, confirming this doctrine, asserts that “ an inferior navy will not be able, at the same time, to fight for the command of the sea and attempt to destroy the enemy’s commerce.”

Anyway, whilst naval warfare does not go back to the heroic period, we need hardly anticipate such occurrences as have been described. For these very reasons, some writers belonging to countries who do not consider themselves able to fight against Great Britain in that manner (in squadrons),

* A. T. Mahan, “Lessons on the War with Spain.”

† Saint-Pierre.

aspire to the second form of naval warfare, or a cruiser war, in which they fancy they see advantages. Clemenceau, in an article published in the *North American Review*, and voicing the aspirations of the French *Jeune Ecole* who were inspired by Admiral Aube, and admitting that Great Britain must be the arbiter in any naval struggle, on account of the French navy's inability to stand against her, advocated an onslaught on her commerce as the only practical method of making war on her at sea, that is to say, a cruiser war.

But the *Jeune Ecole* were consistent in their way of thinking, although it was open to argument. Declaring in favour of a naval policy on those lines, he proposed the immediate transformation of the whole naval *matériel*.

In an anonymous pamphlet published in 1885, supposed to have been written by Admiral Aube, the above-mentioned way of thinking was set forth in these words: "The navy of battleships has no reason for being; it will disappear, together with naval battles of which it was the instrument, to give place to a new navy, which will be the instrument of the war of the future, a cruiser war, a commercial war." And the author next went on to consider the torpedo vessels, the gunboats, and the cruisers, all of very high speed, as the principal instruments of that style of war, which would be a war of extermination and without mercy.

The doctrines of the *Jeune Ecole* were immediately condemned in England and Germany.

The British Foreign Office went so far as to demand an explanation from France explaining how an admiral on the active list was allowed to publish them, not only in the public press, but in other publications, duly signed, when in that country no naval or military officer may publish anything before it is submitted to the official censorship. France explained the case as best she could, and soon afterwards appointed Admiral Aube Minister of Marine!

In Germany the same ideas were also disapproved of, it being declared once more that a serious war has for an object the destruction of the organized forces of the

enemy, and not the ruining of private and inoffensive individuals.

A military force which goes in for burning and pillaging loses its discipline, and consequently it weakens itself.

These opinions, which were so hotly discussed abroad, were not even countenanced by the French authorities. As Vice-Admiral Réveillère said in the preface of a good book,* the *Jeune Ecole*, as well as their leader, had frequently been exaggerated, passionate, sometimes inaccurate and unjust, and their opinions were regarded with suspicion, if not actual hostility; the result being that instead of discrediting the battleships, the authorities continued to build them in their arsenals and shipbuilding yards with the same energy as before. The reason being that, given France's inferiority at sea, a cruiser war could not be carried on by her without running even greater risks than she would by adhering to her former policy. This form of making war at sea, under those conditions, can only be undertaken in certain places and for a limited time; to carry it out on a large scale, it would be necessary to possess a great number of cruisers and other suitable vessels, as Admiral Aube wished, and also many and well-stocked coaling stations. Above all it entails a tactical error, by causing your forces to be scattered, dividing as it does at once your navy into two parts, one portion to destroy the enemy's commerce, and the other to protect your own coast line. Any one who is weak before adopting such a plan, would be even weaker by attempting it. An inferior navy which had absolutely lost the command of the sea, but who yet possessed some powerful cruisers, might perhaps attempt in some way to compensate itself by adopting these tactics, destroying and devastating; but illusions on this subject must not be entertained, for such tactics might only cause the increase of the indemnity to be paid when the war is over. And it should also be borne in mind that retaliation is fatal to this form of waging war. Should the enemy undertake reprisals, it is clear that most damage would be done by the strongest side, which has the

* "Les guerres navales de demain."

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advantage besides of being able to collect superior strength at the most dangerous places, and could, in their turn, by attacking the other side's commerce, place their cruisers in great danger.

It is obvious, therefore, that an inferior navy ought not to embark on a cruiser war, which primarily entails the scattering of its forces, a proceeding which is always attended by evil consequences, and even in opposition to the principles of war. It is for a powerful navy that these tactics might have advantages, especially as they help to emphasize the command of the sea. And in this particular case our harbours, which form the great strategic triangle of the Atlantic, as well as those in other parts of the world, would be of the greatest value to our ally.

Privateering has for its sole object the destruction of commerce, by the attack and capture of merchant vessels sailing under the enemy's flag, or under any other flag covering contraband of war. For this purpose merchant ships specially prepared are employed, their commanders receiving special powers, given them by their "letters of mark."

The Treaty of Paris, on 16th April, 1856, prohibited this form of warfare, however; Spain, the United States, and Mexico being the only countries which refused to sign the agreement. And for this very reason it is interesting to note that the two first-mentioned countries, although they did not sign the convention, both agreed in 1898 not to resort to privateering. This procedure is considered by authoritative writers as a unanimous and definite condemnation of that form of war. Besides, its adoption will depend less on the wish of the weaker opponent than on the attitude of the neutral powers. It is to the interest of these latter to keep the commercial routes open, that their ships may carry their cargoes without dangerous and vexatious interruptions, which would be bound to occur if a privateering war was going on.

Commander Mahan, that clever writer on naval matters, is dead against privateering, and sets forth his case in the

following manner: "Amongst French officers, and even in the United States, there is an inclination towards the belief that privateering would be absolutely sound and successful, especially if employed against a commercial country like Great Britain." A French officer, Lamotte Piqué, writes: "In my opinion the safest way to fight Great Britain is by attacking her commerce. There can be no doubt that the damage caused would be great, and there is also no doubt that privateering would play an important part amongst the secondary considerations of a war; but to place it as the first and principal consideration, and to consider it capable of crushing an enemy, shows want of thought and is a dangerous illusion, and it would only be advocated by some incompetent representative of the public on the grounds of economy. If a nation's treasure was now carried, as in days of old, on those splendid Spanish galleons, perhaps a war might still be ended by their capture; but when the treasure is on board thousands and thousands of vessels which fetch and carry from every part of the globe, when the rays of those riches spread themselves everywhere, the branches may suffer some damage, but the trunk will remain uninjured. Only by a prolonged dominion of the sea, and by a lengthy period in possession of the commercial centres, could one attack, but not destroy, that vigorous life."

In truth, the British Mercantile Marine, which is to be found in every sea, exercising in it a supremacy corresponding to its greatness, could be severely damaged by privateering, but when one realizes that a short time ago it numbered some 56,800 vessels with a gross tonnage of 19,500,000 tons, and that all the other mercantile navies of the world put together only reached 13,000,000 tons distributed amongst 84,000 vessels, it will be seen without difficulty that it is she who could employ a greater number of and more powerful ships in exterminating her enemies in such a war. In adding up the losses caused by that war, it would surely not be Great Britain who would be the greatest sufferer.

On account of its being of fairly recent date, the lesson

preached by Mahan, Colomb, Callwell, and Bonamico, is not yet sufficiently widely realized, which is that the prosperity and power of nations on the sea are acquired in times of peace, and those influences thus obtained have a decided bearing on the results of war when it comes.

CHAPTER VII

NAVAL OPERATIONS AGAINST COASTS

FROM what has been already said one would conclude that in any great future European war in which Great Britain takes part, the tactics she would most probably pursue would be that of bringing on battles by assuming a bold offensive, with the object of defeating in detail the various fleets allied against her, and thereby preventing their amalgamation, which might give them a dangerous preponderance. Even if the principles of strategy alone did not indicate that line of action, the schemes of the naval manœuvres of the last few years, and the actual confessions of technical authorities on the subject, do not leave any doubts.

In carrying out such a plan, even admitting that Great Britain's naval predominance would be great, yet all would not be plain sailing, she would encounter many difficulties with which she would have to contend. The prophecy of the American General Shafter, that "in a naval war France's fleet would be swept from the seas in less than a fortnight," would surely never come true without allowing a considerably longer period for its fulfilment.

While awaiting the formal attack of the British squadrons, two ways are open to their adversaries, who, recognizing their inferiority, will surely endeavour to avoid as long as possible any decisive battle. The first would be by following Napoleon's maxim, equally true at sea as on land: "Manceuvre, so as to force your plans upon your enemy, so as not to give him time to carry out his own, and that you may profit by his mistakes." That is to say that strategy would play by far the most important part at this period

of the campaign, almost postponing any tactical action, especially any such as an attempt at landing on an enemy's coast, which is considered by good authorities as of quite secondary importance. There are many who are of opinion that Napoleon's advice would be followed by France. "Experienced sailors," says a well-known writer,* "are of opinion that the best way to fight the fleets of Great Britain or Germany would be not to engage in formal battles, especially against Great Britain, who possesses over us a considerable numerical superiority, but by rapid manœuvring." Mahan, describing what he considers ought to be the tactics of an inferior squadron, says "they must prevent the enemy becoming master of the sea as long as possible."

To carry this out it must feint vigorous and impetuous attacks, and it must threaten the enemy's lines of communication, but it must refrain from a decided engagement with unequal strength, *even though the bombardment of a coast town be threatened*. By which he means that so entirely out of the question ought to be the idea of landing operations by a fleet which is obliged to resort to manœuvring in order to gain time, that it must refrain from such an attempt, even if tempted thereto by the enemy.

The object of obtaining the absolute command of the sea, by the destruction of the enemy's fleet, naturally coincides with the resolve of the latter to delay a decisive battle until its inferiority is compensated by favourable opportunities.

The concentration of an inferior fleet, but with its movements and supplies always assured, that is, a fleet in being, as it is nowadays called in technical language, has been, ever since the battle of Beachy Head, lost by the British Admiral Torrington against the French Admiral Tourville, a form of strategic defence which may force the enemy's hand, and in time may bring about favourable openings; in any case it would for some time prevent any operations which necessitate the absolute command of the sea, amongst which are included a military expedition by sea.

* Colonel Thomas, "Sur Mer. La Marine et la Défense nationale."—*Les Alliances*.

As an alternative, in order to avoid annihilation in formal and decisive battles, a fleet may take shelter in a harbour suitable for that purpose, and thus oblige the attacker to divide his own forces, one part being necessary to attend exclusively to the blockade, and the other to the various remaining requirements of the war. In order that these tactics may not be attended by grave danger to the attacker, it will be necessary for his superiority to be great.

An English Commission which was appointed for the purpose of making an appreciation of the lessons to be gathered from the naval manœuvres of 1885, writing on this subject, ends by asserting that, for a blockade to be effective, the strength of the blockader must be superior to that of the blockaded in the proportion of 5 to 3. And since then, both Mahan and Bonamico, the two great authorities, have expressed their opinion that a blockade could be raised by a squadron half the strength of the blockader, provided the strategic and tactical considerations at the base of operations are favourable. From which it would appear that the bare fact of the French fleet being blockaded in the ports of Cherbourg, Brest, Lorient, and Rochefort would not enable Great Britain to despatch a large convoy of troops to Portugal. It is even very probable that its departure from the English coast would coincide with an attempt to force the blockades. Military expeditions, as has been shown, are only attempted when absolute command of the sea has been obtained, and a blockade is after all but a preparatory and fallible operation which helps to attain that end.

Surely the British Government would never cause to be said of itself what Mahan, commenting on Aboukir, says of Napoleon : "Even a great genius may commit an irrevocable mistake. Napoleon's intuition was not wrong in making him believe that the principles of the art of war were the same both at sea and on land, but he did not know how to apply them, or rather, he did not grasp under what circumstances to apply them, and not knowing the limitations of naval warfare of those days, he drew from them erroneous conclusions. Aboukir and Trafalgar were the graves of two

great conceptions; they depended on the same causes, they had the same result, and they showed Napoleon's inability to understand how the conditions imposed by the sea, and the capacity of their crews, affected the value of his ships."

Brialmont, in his "Histoire du Duc de Wellington," makes identically the same observation in these words: "Napoleon's great genius, even after the tremendous disaster of Trafalgar, was unable to understand that no operations against England could be successful, *unless the command of the sea was first wrested from her.*"

Consequently, supposing any future naval war to take the nature of the *grande guerre*, *i.e.* battles, operations against the coasts of Portugal by combined fleets need hardly be anticipated. As, however, such a war would probably not follow exactly on expected and perfectly regular lines, as has always happened in former struggles, it is quite possible that a few vessels, operating independently, might make some attempt against our coasts. And this would be an operation partaking of the nature of cruiser warfare, but this or even privateering is compatible with the *grande guerre*.

But in the course of the present study it will be shown how improbable it is that even this should be attempted by the enemy. Nevertheless, supposing it actually to have happened, it follows that the defences of our coast, as represented by our navy, must be sufficiently strong to effectively beat off any attack by an enemy whose strength cannot be very great either in number or in quality, because really good and powerful ships would no doubt be required with the main squadrons. The relative importance between localized and passive defences represented by fortifications at vulnerable points, and mobile and active defence as represented by the navy, cannot be compared. The navy is undoubtedly the more important, and for reasons which will be explained further on.

CHAPTER VIII

THE EVOLUTION OF COAST DEFENCE

THE methods adopted in coast defences have, like everything else connected with the art of war, undergone great changes, owing to the progress made by science. Just as the sword, the spear, and firearms characterize two distinct periods in military history, the rowing, the sailing, and the steamship periods constitute three equally characteristic epochs in naval history, and exercise a manifest influence in the evolution of their respective tactics, confirming Napoleon's words, that for every new instrument of war there must be a corresponding change in the method of waging war.

In olden days the defence of a coast was based on the principle of building fortifications along it at all points where there was anchorage, or which offered landing facilities, with the object, not only of protecting the commerce and the property of maritime populations from the insults of an enemy's fleet and from the ravages of pirates and corsairs, but also to protect the growing coasting traffic, enabling the vessels to proceed without any fears, and to take shelter on the appearance of the least danger.

This system corresponded with the rowing and sailing periods, the first of which had as an epilogue the battle of Lepanto (1571), and the second, Trafalgar and Navarino (1805 and 1825). The latter was the most glorious period of the wooden ships, upon which coast artillery could inflict great damage, being able to put them out of action with greater ease by reason of their movements being always dependent on the state of the weather and the caprices of

the winds. For this very reason there was nothing in common in those days between land and naval defence. Squadrons did not possess much defensive value as regards their coasts, and their offensive power was but small in comparison to modern vessels. The offensive power of a sailing squadron was almost entirely naval. Battle and cruiser tactics were the only forms of fighting for which they were fitted.

The introduction of a new motive power, namely, steam, brought about the enlargement and a total change in naval construction, and also caused the offensive and defensive capabilities of ships to become much greater. They were thus able to dispense with those many sheltering ports, which it therefore became unnecessary to fortify. The offensive capabilities of steamships of great speed, which enables them to traverse long distances in a short time, gives them the same characteristics and the same importance as fortifications. Land defence can but concentrate its resources at points of great strategic importance, all the more so, as even the richest states find difficulty in keeping abreast of the vast sums which have to be spent on modern coast fortifications. With the battleships and cruisers armed as they are with powerful artillery, an attempt to defend the whole length of a coast line would be the surest way of facilitating an attack. Ordinary ports or localities, which can be easily entered, do not therefore deserve the honour of being fortified if they do not possess strategic importance. Neither the bombardment of unprotected coast towns, nor any large landing, are to be feared whilst one can count on protective naval forces who will dispute the command of the sea with one's adversary.

A good network of railways, and the necessary telegraph lines, not to mention torpedo-boats and submarines, will constitute a better form of coast defence than the construction of a few batteries, and they would have the signal advantage of contributing towards the public good in times of peace.

This great change, brought about in the ideas which

ruled the old system of coast defence, was not effected all at once by the introduction of steam navigation.

Like all great changes which have taken place in the world, this one also had its evolutionary period. The heavy armour, together with the great speed, on the one hand, and the quick-firing artillery, the torpedo and high explosives, have introduced changes and different methods of action into naval tactics.

In order of sequence, the defensive capacity of fleets went through the following evolutionary periods:—

1st. Up to 1850 the ancient system still prevailed, as steamships were not yet at that time in a majority.

2nd. From 1850 to 1860, steam becoming the universal form of propulsion, it commenced to influence old criterions, but the principle was still adhered to that fleets simply constituted a weapon of offence, and that by themselves they were useless from a defensive point of view.

3rd. From 1860 to 1870 the capabilities for defence of fleets began to be understood, but it was limited to ships possessing a small radius of action, duly protected by fortified harbours.

4th. From 1870 onwards the principle concerning the defensive capacities of fleets has been better understood, and it has changed from the theory of coast defence vessels to sea-going ships, and this phase comprising two distinct subdivisions, the first being that vessels of sufficient tonnage for the strategic and tactical considerations for which they are required, must be supported at important strategic points. The second, that the defensive fleet be composed of vessels which must be independent of strategic centres, and able by themselves to offer resistance to a united naval force.

Concurrently with this evolution regarding the powers of defence of navies, as is natural, there was a corresponding development in the theories governing coast defence. The theory of those who were of opinion that every point of the coast which might be attacked must be fortified has now been challenged by the no less radical opinion of those who contend that only those points which form the bases of

operations for the fleet should be fortified, because the remainder of the coast line will be defended by the fleet, and if the latter be unable to do so, no other measures would be of any use, for supposing the fleet destroyed, or incapable of acting, none of the means suggested up to the present to make up for its loss would prove efficacious.

Large fleets are, therefore, according to the latest theories, the best means of coast defence. But the propounders of this doctrine differ in their ideas on the type of vessel of which these protective squadrons should consist. There are some who consider they should consist of small vessels, with which, they contend, a good strategic defence could be assured; others prefer medium-sized ships, possessing a considerable amount of tactical value, without damaging their strategic importance; and again others are in favour of enormous ships heavily armed, a species of floating fortress, and capable of operating independently, one might almost say, of any base of operations.

These differences of opinion have, however, nothing to do with the subject about which this book is written. In order to follow its arguments, it will be sufficient if the general principles of the above be borne in mind. As is always the case with every evolution of progress, the putting into practice of the new ideas only comes some time after those ideas have been promulgated. Nevertheless, the changes in the system of coast defence by European nations have been very great, as will be shown further on. Above all, the new style adopted has become more complex by the introduction of new elements of an essentially naval character, which is already a tribute to the new ideas. The various component elements which go to make up the systems of coast defence actually in force are the following:—

Firstly.—Mobile sea defences, *i.e.* fleets.

Secondly.—Fixed sea defences, *i.e.* submarine mines, torpedoes, etc.

Thirdly.—Fixed land defences, *i.e.* fortifications.

Fourthly.—Mobile land defences, *i.e.* troops.

In the combination of these various elements, applicable

according to the special resources and requirements of each country, the naval element naturally preponderates. The employment of fortifications, it is recognized, should be as restricted as possible, as is advised by Colonel Llave y Garcia, professor of the Spanish Staff College: "The greatest care should be taken to guard against the tendency which exists of fortifying every point which appears to lend itself for the purpose, and also not to forget that, just in the same way, it is not possible to defend a land frontier only by fortifications, and that these should be but *points d'appui* for the operating army, in like manner fortifications alone are not sufficient to safeguard a coast line, and that all fortified harbours are principally bases for the defending fleet, which ought to combine its operations with those of the land forces."

Italy is the country in which the evolution in the system of defending a coast line has been most prominent, which is easily explained by the nature of that country's boundaries. She is the European nation which possesses relatively the greatest length of coast line, and also the greatest number of important coast towns. Consequently the problem interested her specially, and therefore its solution claimed the particular attention not only of her most distinguished naval authorities, but also of her military men. It was even one of the latter, *i.e.* General Mezzacapo, who first advocated the intimate co-operation of land and sea forces. At first this idea was scouted, but after long and exhaustive discussion was accepted unanimously.

In the report of the Commission appointed in 1862 to study the general plan of the defence of Italy, this new departure was already outlined. The work, which was only completed in 1871, stated: "In conclusion, the Commission feels itself obliged to declare, with regard to the general plan of the defence of Italy, depending as it essentially does on the action of the navy, that it is the duty of the Government to develop our naval forces to an extent consistent with the great length of our coast line, and with the task which would fall to its lot, should Italy find herself engaged in a war against a first-class naval power."

Two years later, in 1873, Admiral Saint-Bon, when Minister of Marine, commenced an active propaganda which resulted in the complete reorganization of the Italian navy. On the occasion of the debate on the budget, speaking on the above-mentioned principles and emphasizing them by the demonstration of the uselessness of various naval fortresses upon which vast sums of money had been spent, that enlightened sailor said :

“ When I took office, I cast my eyes around, and contemplated that enormous extent of coast which surrounds Italy. I first examined Genoa, Genoa the superb, haughty on account of her palaces, and who would have the right to be even more so by reason of her commerce, and the forest of masts which rises in her harbour, and I saw Genoa exposed on every side to bombardment, without the smallest possibility of protecting her by artillery on land, in case of war with a naval power. Quitting Genoa, and proceeding down the coast, I saw Leghorn likewise exposed, but in even worse plight, because nothing could be easier than for the enemy to seize her harbour and convert it into a base of operations, a point of disembarkation, or a base for supplies.

“ Beyond Leghorn, towards the Roman shores, I came upon a long series of beaches open to hostile landings, and which artillery on land would be powerless to prevent. And Naples, the greatest of our cities, is the most liable at any moment to be forced to pay up millions upon millions without perhaps being able to pay sufficient ransom to free herself from the enemy’s guns. But what use is it to continue our tour round Italy, and to talk of Palermo, of Messina, and of all the magnificent cities which are situated round the peninsula ?

“ Seeing all this, I said to myself : What can be the object of our navy, if not to defend the coasts ? Yes, that ought now to be the sole object of our fleet ! ”

Both the parliament and the nation were the more easily converted to these new ideas, as they had already been extolled in an energetic campaign by noted military writers, amongst whom had been Saint-Bon himself. The

committee of deputies which was formed to superintend the reorganization of the navy, openly embraced the new minister's doctrine, and their proposals contained the following:—

“Coast defence cannot be considered only from the restricted point of view of simply fortifying certain points along the coast. By commencing on these lines one would probably end by having to fortify the whole coast line. In ancient days the various points on any coast were all equally open to the attack of the enemy's ships, which resulted in the construction of the innumerable fortifications which are yet to be seen on the shores of any maritime nation. Nowadays one must proceed differently. There is no doubt that every place on the coast can yet be attacked by an enemy; but the easy and rapid communication by railways from the interior to the coast, and the speed with which steamships can come to the assistance of threatened points, are factors which render such attacks less likely, and one may consequently be more sparing in selecting points to fortify.

“On the other hand the offensive strength of modern ships is such that it is no longer any use constructing the old-fashioned batteries which, in days gone by, were able, without much expense, to beat off the attacks of isolated vessels or even whole squadrons. . . .

“In studying coast defence, there are two phases which must be kept distinct: to ward off the enemy's attack or attempt at landing; to repel and resist him, when the attack cannot be foreseen. The first is attained by the fleet which is cruising on the high seas seeking the enemy's squadrons, to defeat them, or to scatter the convoys carrying landing troops; to prevent their approaching the coast; to surprise them in any attempted landing; to send cruisers to the arsenals to obtain information regarding the enemy's movements and intentions. The operations on a large scale which the enemy might attempt for the destruction of important arsenals and for the investment of a great naval fortress, to attack and capture them, and to land any large force to invade the country, are all such as require a considerable collection of the various forces, and

which take some time, and will always be difficult, whilst a defending squadron is still at large, and the attacker's strength has not been able beforehand to destroy or blockade the defender's fleet."

The new theory, transposing the frontiers, was advocated by all the great authorities in different countries, amongst whom stand out Mahan in the United States and Admiral Colomb in Great Britain. Even the cleverest authorities on the land forces did not hesitate to accept this principle, which was at first fought against by them.

Brialmont, that skilful Engineer officer, who at first had expressed less radical notions, came round to the same way of thinking in 1898, when he wrote—*

"In old days coasts were defended against naval attacks by the construction of fortifications at all points where a landing was possible, and rivers, bays, channels, and straits were defended by artillery located along their margin. The coast defences of France, as late as 1859, still consisted of 628 forts and batteries in which were mounted 4238 cannon.

"Coast defence ought to be based on the action of the fleet for whose convenience, as bases of operation and ports of refuge, harbours safe from bombardment are fortified.

"When these harbours as well as the great commercial ports are situated some distance inland, the rivers, or channels which establish communication with them, are defended by the grouping of fortresses and batteries at one or two favourable points at the entrance, and helping their guns with booms, gunboats, and mines.

"In like manner the following are defended by forts and batteries :—

"1st. The entrance to bays or creeks in which the enemy's ships could take refuge from bad weather or after an action.

"2nd. Islands close to the coast of which the enemy might make use as coaling depôts, places of refuge, or ground to camp on.

* General Brialmont, "Progrés de la Défense des États et de la Fortification permanente."

"3rd. Islands which would facilitate annoyance from the enemy, such as cutting communications, attacking convoys, harassing coasting traffic, and from which he might undertake landing operations.

"Now one no longer constructs batteries, as in times gone by, at every point favourable for a landing, or at all salients from which one could command channels or flank beaches. Landings on a large scale have become too dangerous, says Admiral Touchard, in view of the rapid concentration rendered possible by railways. In order that they might be successful, it would be necessary for the fleet which protected the transports to have obtained, for at least a short time, the command of the sea, and that the defenders be taken by surprise, so as not to be able to assemble at the threatened point a force superior to the landing force."

How different is this theory from others previously held by those who advocated the construction of fortifications here, there, and everywhere, at every point where aggression or a hostile landing was possible !

CHAPTER IX

THE INDEPENDENCE OF MODERN WAR VESSELS

MODERN men-of-war, although they possess great fighting power, being masters of their own actions in every sense, obedient to the will of whoever commands them, and possessing all the coefficients which the sailing vessel lacked, to enable them to develop, at the right moment, any strategic or tactical plan, are not without their weak points.

From the point of view of their independence, the sailing ship was superior to the steamer. The much greater free space of which they disposed enabled them not only to carry large quantities of ammunition and of materials for repairing damages, but also enabled them to carry provisions for four or six months. This fact contributed greatly, therefore, to that independence which was the result of the ship being always able to move when and where it liked, provided there was wind, and its being easy for it to remain a long time away from land without replenishing its storerooms and magazines.

All this, however, is now changed by the introduction of steam vessels, for the motive power has to be generated within themselves, and requires much and complicated machinery for its production. The result of this being that the greater part of their internal space is taken up by the various engines and accessories required to make the vessel move, and by far the most important of these is the question of coal.

Naval architecture and mechanics have undoubtedly accomplished wonders in recent times in the direction of

making steamships independent, but as long as some motive power which, like the wind, has not to be generated within the ship itself, or some other form of fuel as effective as, but very much less bulky than, coal be not discovered, the modern ship will inevitably remain more or less bound to those points on land where it can replenish its bunkers.

Apropos of this, a British sailor, Admiral Hornby, in an article in the *Times* not long ago, affirmed that the two most important points which would have to be considered by an admiral in time of war would be the question of coal and obtaining information. During the naval manœuvres of 1890, this question of the consumption and supply of coal was one of the principal points experimented on by Admiral Sir Michael Culme-Seymour, who commanded one of the fleets which took part in the operations, and which was accompanied by colliers, so as to enable them to coal on the high seas, without having to return to their base of operations.

They certainly accomplished their object, but they were favoured with exceptionally calm weather, and were obliged to abandon the first class battleship *Neptune* at Berehaven, on account of her consuming so much coal. Now, in actual warfare, one would not like to have to abandon a powerful unit such as the *Neptune*, neither could one count on calm weather.

During the Chino-Japanese War, the enemies of the Celestial Empire found great difficulty in coaling their ships, and this was not on the high seas, but in the actual ports themselves, and the reason for it was the absence of boats suitable for the purpose.

It is, therefore, not to be wondered at that Admiral Fournier, late Chief of the French Naval Staff College, dealing with the possibility of a war with England, and discussing the question of coaling at sea, should have written the following:—

“Whilst to reckon on convoys of colliers following the fleets, or coming out from neutral ports to replenish them, before Great Britain's strength had been crippled by a decisive defeat, would be to deceive ourselves and run the

risk of a disaster. Until this defeat took place, her ships would certainly never cease following and worrying ours incessantly, in such a manner as to prevent them from fully replenishing their bunkers. An operation of this nature is next to impossible at sea, and we could not think of attempting it within some sheltered bay of some neutral country, or even within its territorial waters, for it would undoubtedly object to a proceeding which might entail reprisals from our formidable foes."

The admiral's assertion is correct. According to international custom, when a man-of-war enters a neutral port to take in coal or for repairs, the time limit fixed for accomplishing such is very short, generally 24 hours, and the amount of coal which can be taken on board is limited to what would be necessary to enable the vessel to steam to the nearest friendly port. But, even worse, should the intentions of the vessel requiring coal be anything but peaceable, it may be refused, as happened to the French fleet during the Franco-Prussian War, when the English ports refused to supply it with coal, because its obvious destination was the North Sea and the Baltic.

Moreover, as coal is considered contraband of war, either of the belligerents may forbid its being taken to the enemy's ports, except by neutral vessels which choose to run the risk of capture. Such coal will be confiscated, if it is clearly intended for the enemy's fleet; if its destination is not quite certain, however, it can only be temporarily detained, and the proprietors compensated, for if the ship carrying it should reach its destination, the enemy would certainly buy its cargo and make use of it against their adversaries.*

By order of the British Privy Council of 31st January, 1862, cruisers which enter neutral British ports must quit them again in 24 hours, except in cases where either the state of the weather or the amount of supplies or damage necessitate a longer stay. The permission to coal is also restricted to such a quantity as would be required to take the ship to the nearest port.

* Bluntschili, "Le droit international codifié."

The Spanish-American War of 1898 was an interesting case from the point of view of international usage, because both combatants were Powers which did not agree to the Paris Declaration of 1856. But the principles set forth in that famous document had become so firmly established as the custom of nations, and had so influenced public opinion on both sides, that both the Spanish and United States Governments declared, at the very commencement of the war, that they proposed acknowledging and applying the laws governing naval warfare recognized by other civilized nations. On these principles were based the President of the United States' Proclamation and the instructions issued to the American cruisers.

The Proclamation of 26th April, 1892, adhering to the Declaration of Paris, recognizes the following principles:—

“1st. A neutral flag shall protect the enemy's merchandise, except it be contraband of war.

“2nd. Neutral merchandise under the enemy's flag, except it be contraband of war, shall not be liable to confiscation.

“3rd. Etc., etc.”

Now, in the instructions issued by the Navy Department on 20th June, 1898, to the vessels destined for blockading and also to cruisers, amongst the articles constituting “conditional contraband of war” is expressly mentioned “coal, when consigned to a naval station, to a coaling station, or to one or more enemy's ships.”

Therefore, from these points of international usage which we have considered, the truth of Admiral Fournier's words will be appreciated, when he insists on the difficulties which will be experienced by a belligerent fleet which attempts to coal anywhere except in its own friendly harbours. Admiral de Saint-Bon, corroborating this view, made the assertion that, “in war time ships would only be able to take in supplies at points which, besides being fortified, would also have to be enclosed.”

Lockroy, the late Minister of Marine to whom the French Navy owes so much, also recognizing these facts, writes—

“France is in need of bases of operations, of sheltered ports, where her ships may replenish their supplies. Modern men-of-war are not meant for long voyages. Like the galleys of old, they are obliged to go from port to port, without staying away for any lengthy period. They are terrible consumers of coal. Their supplies soon run out. The larger vessels could not go from Toulon to Constantinople, even at their most economic pace, without calling at one or more ports. In times of war they will require around them arsenals where they may rest, and where they will find food for their engines.

“We are no longer in the days of sailing ships—the inexhaustible force which propelled ships, and would always carry them to some safe refuge. In every bay, in every gulf, where water and timber were to be found, they could repair their damage, escape pursuit, or recoup after a battle. Nowadays, whatever be their destination, both conqueror and conquered must drag themselves to the gates of an arsenal. They need armies of workmen, staffs of engineers to care for their engines and to treat the wounds in their hulls.”

On the other hand, in contrast with what happens as regards coal, the supply of water and provisions has not been greatly affected when compared with the old sailing ship, because, although the space now available is relatively smaller, yet the crews are greatly reduced in relation to the tonnage of the vessel.

Vice-Admiral de Amezaga asserts that in olden times 40 ships of the line were the equivalent of what would nowadays consist of a fleet of 10 first-class battleships. Forty line-of-battle ships possessed crews amounting to 40,000 men, and represented an aggregate of 140,000 tons; 10 modern battleships are manned by about 8000 men, and roughly total the same tonnage. Consequently, comparing the relative constitution of ancient and modern fleets, we find a reduction of three-quarters in the number of ships, of four-fifths in the number of combatants.

The reduced numbers of the crews in relation to the tonnage, as well as the facility of obtaining water from

the condensers, have helped not only the independence of the vessels, but have also improved the hygienic conditions of life on board. But, on the other hand, the spaces encased in iron and steel, and the advent of preserved and tinned supplies, have greatly reduced the space required for fresh supplies. In modern times a vessel can carry sufficient supplies to last her three months, which is a very much longer period than it would take her to empty her coal bunkers. For a big vessel, steaming at a fair speed, consumes roughly 100 tons of coal a day, and an armoured cruiser, steaming say 16 knots, consumes 60 to 65 tons; take these as rough figures, it will be seen that a man-of-war will not be able to steam at any great pace for much over 10 days without having to take in more coal.

Thus, coal now takes the most important place as a military element in the fleets of the world. All naval operations will for this reason be restricted by the ships' radius of action and the situation of coaling stations; for as they can only carry sufficient coal for a few weeks, and enough ammunition for a few encounters, they will be obliged frequently to replenish both, and this can only be safely accomplished at determined bases of operation.

“Coal strategy” has therefore assumed prominent importance in present day naval warfare; and it was because Spain had not paid sufficient attention to this fact that Admiral Cervera was unable to avert disaster at Martinique, Curaçao, and at St. Thiago de Cuba. These disasters were not due either to want of water, supplies, or even ammunition, but simply and solely to the want of coal.

The American commander, Commodore Schley, was struggling with the same difficulty at the very same time, and on hearing of Cervera's arrival in the East Indies, telegraphed: “Impossible to continue cruising off St. Thiago. The squadron's condition as regards coal is critical. I cannot carry out the Department's orders.”

At the battle of Lissa there were two principal reasons which caused Admiral Persano to give way to the enemy and retire precipitately to Ancona. The first was his having

expended nearly the whole of his ammunition in bombarding the forts which defended the island; the second was the want of coal, which threatened to make retreat impossible.

Modern war vessels, being very complicated mechanisms, also frequently require prompt repairs, and it is only at the great arsenals that the indispensable machinery and tools will be found. In this respect the old vessels had the advantage, for they carried all that was necessary to effect the most usual repairs.

It is these various considerations which have been touched upon that have caused the depreciation in value of many old-time important localities.

Etiennne Lamy, in "Maximes de Guerre," asserts that the greatest effort as regards permanent works should be employed on the harbours, which are spots of the highest strategic importance, and he describes in the following manner the conditions they should possess:—

"It is necessary that a naval harbour be largely and permanently supplied with the requisites of armament and provisions of every description which might be required by men-of-war of whatever type, and also for their repair. It is equally necessary that these operations, as well as the loading and unloading, should be undertaken and completed quickly.

"In fortified harbours vessels ought to be safely sheltered both from the artillery fire and from any submarine action of the enemy.

"It is necessary that the enemy's ships be unable, either by surprise or by any other means, to enter or even to approach the port within such a distance as may enable them effectively to bombard it; and that, on the other hand, your own ships may easily get out or in. And all this can only be brought about by the co-operation of nature and science: a deep and sufficiently wide entrance, good and well located hydraulic and fortification works, and artillery of the greatest calibre."

All the greatest technical authorities agree with the above, and they are not quoted here simply to avoid dragging

out this work to any undue length. But the above quotation is sufficient to show that modern fortified harbours must possess many and more complicated qualifications than was formerly required of them, amongst which qualifications those which ensure the ships immunity from bombardment and their safety and supply, and which guarantee their independence, are the most important. Because a certain port happened to have been a suitable base of operations, or even a port of shelter, during the first two periods of naval warfare, it does not follow that it will possess the necessary qualifications at the present time, in which the exigencies of naval tactics are so very different.

Besides the considerations already enumerated, there are yet others of a different nature, but which also, as will be seen, seem to indicate that we should construct coast defences only after very careful consideration and very sparingly.

CHAPTER X

THE DRAWBACKS OF SCATTERING FORTIFICATIONS ALONG THE COAST

ONE of the principal disadvantages of scattering works along a coast line is the consequent necessity of scattering one's troops. And this drawback is not confined to the actual garrisons of the works, but extends to the troops which would have to support them. This disadvantage makes itself specially felt in small countries, where the numbers of the mobilized army are necessarily limited.

If to this fact, which is indeed in itself not unimportant, are added the considerations that instruction in coast artillery, like naval gunnery, is the most difficult, as well as the most costly, of all branches of that arm, we have still three more points to be added to the preceding ones which must be taken into account when considering the question of coast defence.

To construct batteries and arm them suitably, but to leave them insufficiently garrisoned and uninstructed, is no better than throwing into the sea the amount spent on them.

In the construction of batteries intended for coast defence, the principal object is to prevent the enemy from approaching too near, and this in modern naval warfare can only be accomplished by rapid, accurate, and disciplined fire, and it is necessary to use for this purpose powerful projectiles, in order to slay the enemy and to set on fire and destroy his ships. It will be an artillery duel which will be won by the most skilful, the most intelligent, and the best disciplined combatant.

Even given these conditions, the result is not always assured, because, for fire to be effective, it is necessary "to watch it closely and correct it methodically."

Now, in firing at a moving vessel, to "watch the fire closely" is extremely difficult, whereas "to correct it methodically" is next to impossible.*

This commentary of our best artillery officers, who collaborated in compiling the manual from which it is quoted, likewise appears in the manuals of other armies, expressed by the highest authorities.

The famous French General of Marine Artillery, Borgnis-Desbordes, writing about the method followed in his own country, says: "It is unnecessary to dwell on or expose the errors and defects which exist in the system of fire and organization of our coast defence batteries, when considered from the point of view of actual war. These imperfections are such that, if they be not remedied, there would be reason to entertain the gravest doubts as to the efficiency of their fire, should they be called upon to keep up an energetic and sustained fire in action."

In Spain, the conclusions arrived at by officers who have written on the subject are identically the same as those already mentioned. An Artillery captain, Del Campo, in an essay which was awarded a prize, and published by order of the Government, says that up to the present, in his country, no system is known by which the fire of coast batteries could be corrected.

Another clever writer belonging to the same branch of the service, Major Lossada, writes: "One of the greatest difficulties encountered by coast batteries is the question of making their exercises in peace in any way approach service conditions.

"The practices at moving targets only serve to give a false impression of what the attack of a squadron would really be. The conditions under which these exercises are practised would not usually be found in actual warfare, because, even putting the ignorance usually found respecting

* "Manual of Coast Artillery" (Portuguese).

the different types of ships out of the question, the number of ships which go to make up a squadron, their speed and different methods of manoeuvring are totally different, and these are in their turn absolutely at variance with the moving targets at which practice in peace times is made. Besides, the method of fire is based on observing the spots at which projectiles strike the water, and this would become extremely difficult in actual warfare. And if to all this be added the fact that we have been able to learn nothing as regards the assaulting of well-fortified harbours by sea from any modern examples, it will be seen how difficult it is to advocate any definite system until we can learn something from experience."

Thus, struggling with the difficulties indicated, and learning all we can from what has been written on the subject, it will easily be understood how necessary it would be to equip coast batteries as perfectly as possible, to spare no expense on the material and constant instruction which is required, in order that one may place a certain amount of confidence in their value as coast defences.

A system of range-finding, which in coast batteries is just as important as their armament, and which must now be capable of taking the quick-firing gun as the unit instead of the whole battery, must be able to give the range of the target with sufficient accuracy and rapidity to give the commander of the gun time to make the necessary corrections, aim and fire, and to accomplish all this without having to resort to arithmetical calculations, which, besides being necessarily rough, are always liable to mistakes and waste of time.

The arrangements for lighting up the sea, to enable batteries to fire with accuracy at night, must work with the precision and regularity necessary to guard against surprises, and for this powerful electric-light projectors are required.

The garrisons must frequently be practised at suitable moving targets, which must be either towed or set sailing, as nearly as possible under service conditions, and at all ranges.

The battery's field of fire must be buoyed with the greatest possible precision, so as to mark known ranges, to assist not only in judging distance practice, which, I repeat, is a most difficult matter on the water, but also that, with the aid of these marks, the distances at which ships usually pass may be estimated. The Americans marked the sea outside St. Thiago de Cuba with groups of empty petroleum tins, moored in three lines, foreseeing Admiral Cervera's attempt to get out of the harbour. And the men-of-war which were given the task of watching the exit of the Channel used daily to rectify their stations by these buoys.

It is necessary here to consider the perfection to which not only the points already touched upon, but also telephones, telegraphs, torpedoes, and other equally important matters may be brought; as is also the question of the perfection of training of the garrisons, and the ability and resource of the officers, particularly of the commanders, as upon all these things depends the value of coast batteries, and all that has been here briefly reviewed can only be effected by mounting, at the points to be defended, most costly *matériel* which will require the most highly-trained *personnel*, and which it would be impossible to extend along the whole length of coast.

A distinguished Italian writer says: "If there is a branch of the service, and a particular part of the branch, which necessitates a careful preparation of a highly-trained *cadre*, thoroughly well up in their duties, and into which can be drafted large numbers of reservists, that branch is the Garrison Artillery. It will not be sufficient for these men to know how to load and fire a gun, but they must be able to carry out other duties which, although subsidiary, are of the utmost importance, and for which special aptitude and training is necessary. And these are duties which will not easily be performed by men who have been for some years on the reserve, all the more so if their instruction during the time they were

serving with the colours was not of the very highest order."

History clearly demonstrates that in marine fire, be it either from the shore at ships or from the ships at coast defences, skill is the first element of success. It is because the French have not always paid sufficient attention to this branch of military instruction that they have dearly suffered for the disadvantage in which they have frequently found themselves when face to face with their adversaries. Two conspicuous examples of this can be given: the first was Aboukir, and the second Trafalgar.

At Aboukir the technical superiority of the British Artillery was the cause of Admiral Bruey's defeat. Maurice Loir, writing on the subject, says: "In this encounter between two fleets of nearly equal strength, there was but an artillery duel: victory was bound to go to that side which possessed the better trained artillerists, the more skilful gun-layers, and consequently the better crews, for the art of keeping cool in action is only acquired by experience."

At Trafalgar, Nelson, with 27 ships of the line, fought a combined French and Spanish fleet of 33, of which he destroyed and captured 25 by the skill and soundness of his tactics and the behaviour of both officers and men; but especially was it the accuracy of the British gunners which once more upheld British dominion. The want of skill of the French gunners, who were recruited anyhow, clearly proved on this occasion how necessary is the careful and continuous instruction of Marine Artillerymen, and consequently also for artillerymen employed in coast batteries, whose fire conditions are almost analogous.

Professor Roloff, writing in the *Marine Rundschau* of December, 1900, about Napoleon's naval disasters, attributes them in a great measure to the Marine Artillery having been done away with at the time of the Revolution, because this arm, which had been carefully raised and trained by the Royalists, was considered to be useless and contrary to democratic principles! It was therefore superseded and

the ships' guns were manned by ordinary artillerymen, and no attention paid to the special instruction required in naval gunnery.

The causes of the disasters of Aboukir and Trafalgar were again revealed by the Italians at Lissa. Commander Yardley, in his book, "Our Fleet To-day," writing of the consequences of that battle, as far as the Austrians were concerned, says: "On the Austrian side only the wooden ships suffered from the enormous quantities of projectiles fired during the battle; their armoured vessels scarcely suffered at all, and this must be put down to the protection afforded them by their 4½ inch steel plates, and also to the inaccuracy of the Italian fire. The latter was altogether disorganized, their broadsides even failed to strike the target, and I have even heard it stated that their guns were sometimes fired without projectiles! All this shows a state of very lax fire-discipline on the part of the Italian officers, and this is a point to which the most serious attention must be paid by all navies."

If we turn from the sea to land, we see from the examples of history, as was only to be expected, that in the case of coast-defence batteries parallel errors were attended by equally disastrous results.

The passage down the river Min, which was accomplished by the French squadron on the 25th-29th August, 1884, which went on successively either destroying or silencing the fortifications which it passed, some of which were casemated, armoured, and armed with modern 18 and 21 centimeter guns, with the fire from which the enemy was attempting to stay their progress, had as the principal factor of its success the astounding ignorance and incapacity of the Chinese gunners.

Lack of skill on the part of the Siamese gunners was also the cause of their inability to stop a French despatch-boat and a gunboat from forcing the fortified entrance of the Mai-Nam on the 13th July, 1893.

During the Brazilian Civil War the insurgent men-of-war several times forced the entrance of Rio de Janeiro,

both by day and night, the incapacity of the garrisons of the works defending the entrance being such that on the 17th and 18th of August, 1893, four ships were able to force the entrance without sustaining the least damage. It was only on the 1st of December, and on the 12th January, 1894, that the *Aquidaban* and an auxiliary cruiser were hit by a few projectiles, which caused scarcely any damage, and which did not even check their progress.

The absolute ignorance of the Spanish gunners who manned the batteries at Cavite, who had never fired at moving targets, contributed even more than the weakness of the guns which they served to the fact that Admiral Dewey's squadron was able to annihilate Admiral Montojo's ships inside Manilla, with the loss of but one killed and ten wounded.

Mahan, in his book on the Spanish-American War, says that after Cervera's defeat at St. Thiago a Spanish journal related how the writer of the article had a year previously visited that admiral at the Arsenal in Cadiz, where the following conversation took place :—

“ It is the universal opinion that should war break out you will be asked to take supreme command of our fleet. . . . ”

“ If that be the case,” he replied, “ I will accept the honour, but with the firm conviction that I shall be going to a second Trafalgar.”

“ How could such a disaster be avoided ? ”

“ In the first place by allowing me to burn 50,000 tons of coal in manœuvres and 10,000 tons of projectiles in target practice. If this is not done we do but sail to a second Trafalgar. Remember what I now say to you.”

From which it seems that both Cavite and St. Thiago were the results of the same cause—the absolute inefficiency of the Spanish gunners.

But it is unnecessary to continue seeking for outside examples; if we but consider certain pages of our own history, we will learn from them the same lesson, *i.e.* the futility of marine fortifications if their guns be not handled by highly trained crews.

When, on the 11th July, 1831, the French fleet, under the command of Admiral Roussin, forced the entrance of the Tagus, it was defended, according to his own testimony, by about 300 guns of large calibre, distributed amongst various forts, and aided by nine ships armed with some 350 guns. This statement must be a great exaggeration, however, because national writers of that time assert, and historians confirm the fact, that all the forts were badly garrisoned, because D. Miguel's Government was trusting to an opportune and strong intervention from the Court of St. James, which never took place. It is nevertheless certain that at least the fortifications of St. Julian and Bugio (N. and S. of the mouth of the river) were properly armed, and also that there would have been time to garrison all the rest, because the enemy's fleet anchored off Cascaes (six miles from the mouth of the Tagus) on the 6th July, the ultimatum was only sent on the 8th, and the forcing of the entrance was only effected on the morning of the 11th. This was accomplished by the enemy without his suffering the least damage. His fleet consisted of 13 ships carrying 700 guns, and he was entirely successful, silencing every fort which opened fire against him as he advanced. This sad fact, according to Admiral Roussin's own statement, confirmed by our historians, was due solely to the absolute uselessness of the garrisons, both as regards the time at which they opened fire and the inaccuracy of their aim. "The greater part of their projectiles," says Admiral Roussin in his despatches, "passed over the ships, as had already happened at Saint Jean-d'Acre, at Tangiers, and at Mogador." And in summing up the operations he ends by saying: "A fleet which for three hours faced so many batteries, considered formidable, can almost be said to have suffered no damage whatever."

If even in the time when "four guns on land were worth more than a ship carrying one hundred and twenty," as was stated as late as 1844 in the "Aide-memoire des Officiers d'Artillerie," the want of skill in the various garrisons caused such detrimental results as those above instanced, it is

much to be feared that the same thing might happen again, when the numerous batteries with which it is now proposed to defend Lisbon, the mouth of the Douro, Leixoes, Lagos, Setubal, and Cascaes, are completed, if we are not prepared to spend considerable sums in the instruction of their garrisons, and if a very different course of instruction to that which has up to the present been in vogue be not adopted in the up-to-date batteries at the mouth of the Tagus.

Under the conditions of modern warfare, proper instruction has increased in importance, on account of the rapidity with which the targets aimed at can get outside the radius of action of fixed artillery. And the development of the greatest possible rapidity of fire is not enough to make up for this, as can be easily proved. Given that the greatest effect of modern artillery against armoured ships may be expected in the third and last defensive zone, which would be about 1500 metres, vessels would only be within this especially dangerous range of the guns of a fortress for a distance of, roughly, 3000 metres.

Now taking, for the sake of calculation, a speed of twelve miles an hour, about which speed vessels would probably be manœuvring under the circumstances, and we find that a vessel would travel 370 metres per minute, and that therefore she would only be within decisive range of the enemy's artillery for about eight minutes. But the more powerful the guns, the more complicated and lengthy is their working, and it has been shown by experience that a heavy coast artillery gun can only fire about one round every five minutes. Therefore the enemy's ships in travelling those 3000 metres would only receive at the outside two rounds from each gun in the fortress.* It is true that a fortress will not attempt to defend the entrance with only one gun, but it is likewise true that the enemy will also not try and force the passage with only one ship. And as effective shots against armoured vessels

* "The Manual of Coast Artillery" (Portuguese) states that it is generally admitted that the guns of a fortress defending a passage will probably only get in one round at any vessel trying to force the passage, as she will make the attempt at her highest speed.

(not counting high-angle fire, which is so difficult against moving targets) are principally those which are aimed and strike direct, it will easily be understood how necessary is the greatest perfection in the training of the garrisons of coast-defence batteries, so that one may place some confidence in the effectiveness of their fire in the hour of the nation's trial. In order to realize the uncertainty of Marine Artillery fire, we need only consider the fact that the American fleet at the battle of St. Thiago de Cuba fired 8935 projectiles at Cervera's vessels, of which only 125 struck the Spanish ships, that is $1\frac{1}{2}$ per cent. And the American casualties in *personnel* were in this battle, 1 killed and 11 wounded ; 9 wounded at Cavite ; 2 killed and 10 wounded in the attack on the forts at Cienfuegos ; and 1 killed and 7 wounded in the bombardment of Porto Rico. These statistics are the best confirmation of what has been argued. It is on this account that the highest authorities of the subject affirm that in theory forts and batteries are not capable by themselves of effectively defending the entrance to a harbour.

Therefore, to construct coast defences, to equip them with their proper armament, and to appoint garrisons, but not trouble about their indispensable training, which is costly, nor to organize the other various defensive elements (nothing is lost by repeating this), is but to throw away the sums spent on them.

Besides, the advance of science and industries sometimes renders useless in a very short space the considerable sums spent on fortifications.

From official documents we know that from 1871 to 1884 France spent 569,865,000 francs in fortifications, and 1,089,130,000 francs in arming and equipping them. Out of the sums voted for this purpose there still remained after the above sums had been spent a credit of 97 millions (francs) for armaments, and 132 millions for fortifications, when it was realized in 1886 that the works which had been constructed were useless against high explosives, for which reason the completed works had to be recommenced. In writing of this fact a distinguished French general says that

with the sums expended they could have raised the effective peace strength of the army to such an extent as to have secured the safety of the country much more effectively. All the more so because France possessed so great a number of forts and fortified towns that the arsenals were unequal to furnishing them all with artillery, there was not sufficient organization for the supplies necessary to make them capable of resistance, and the battalions of artillery would have had to be trebled in order to furnish garrisons for them all.

Besides, in the case of Portugal, over and above the drawbacks and dangers referred to, there would be one which is even more serious, which would be the weakening of the already failing *personnel* which we could mobilize in order to stem, not only the main attack, but also the various secondary or minor incursions of an enemy attempting an invasion across our frontiers.

Besides the actual garrisons which would have to be taken from the army for these works in the north, centre, and south of the kingdom, it would still have to supply the troops to defend them from the inevitable attacks of troops landed by the enemy's fleet. Generals Brialmont, Howard, Douglas, and Admiral Colomb are equally agreed that a naval attack, if not undertaken in conjunction with a landing force, is an audacious and probably fruitless undertaking, and Colonel Furse, who has already been quoted several times, likewise asserts that history offers few examples where ships have attacked fortifications without being supported by a landing force.

Now, therefore, the troops which would thus be required and rendered immovable to furnish garrisons for and to protect these proposed fortifications along our coasts, would at the lowest computation amount to at least two brigades.* It would indeed be a grave error to inutilize, as regards the main operations of a campaign, such a considerable force without gaining any very appreciable advantage; for if the

* B. Sabetin, in his "Etude sur l'Organisation de la Defense des Côtes," asserts that for the defence of the five fortified harbours of France, and for the protection of various sections of coast line, 100,000 men are required.

positions which it is proposed to fortify were in reality of the importance imputed to them, considering the want of breadth of our country, a simultaneous attack from the sea and from inland, which might easily be effected, would render them untenable.

From these same arguments it can be taken that the splitting up of the fighting forces which would result from the construction of these numerous fortifications would only once more prove the correctness of the well-known tactical axiom, "scattered troops are beaten troops."

An eloquent example illustrating this axiom, especially with regard to coast defence, is furnished by the American Civil War. In 1862, in the early days of the war, the Confederates, determined not to give ground without disputing every inch of it, fell into the error of fortifying and occupying many points along the coast and on the banks of the rivers. Experience soon taught them that the weakness engendered by scattered forces obliged them to abandon many of these positions, either by reason of direct assault by the enemy or by his manœuvres. Towards the close of 1864 they were therefore only holding Charleston, Wilmington, Savannah, and Galveston. But, having their forces concentrated at these points, they were able to offer a very stubborn resistance to the efforts of the Federal navy. The lesson taught by this fact ought to give us special food for thought. Instead of dividing our available resources along the coast or even at various points along it, let us concentrate them at the points which strategic principles clearly indicate, and thus follow the example of the Confederates. A small country, and one in financial difficulties, cannot act otherwise, because she cannot even stand the expense entailed by the acquisition and mounting of the quantities of varied and costly material required for coast batteries. Neither does she possess amongst her officers specialists of the highest technical and practical knowledge such batteries would require, nor the sergeants, corporals, or men of which such garrisons should consist. Neither could she spare from her already attenuated fighting forces such an important body of troops by reason of

their quality and quantity as would be required, not only to garrison but to support all the coast batteries which the fertile imagination of certain military writers consider must imperatively be constructed for the defence of Lisbon, Setubal, Oporto, Cascaes, Leixoes, and Lagos, and this *before even considering the defence of the frontier*. The country is absolutely deficient in the resources, personnel, matériel, and finances which such a programme would necessitate.

This is the conclusion arrived at from the study of the theoretical side of the question. But coming down to hard facts, by carefully going into the arguments put forward as indicating the absolute necessity of fortifying each one of those points, we will see how very unsubstantial they are in each case. From whatever point of view we consider our coast defence, the one conclusion only can be arrived at that, along our coast line, it is only Lisbon harbour which possesses all the conditions which point towards the necessity and expedience of its defence.

CHAPTER XI

THE DEFENCE OF CASCAES AND SETUBAL

IN considering the defence of our country, there cannot be, in truth, two opinions as regards the necessity of fortifying Lisbon and its harbour against attack, although there may be differences of opinion regarding the manner in which this should be done, and the extent of the line formed by the proposed batteries. In a land campaign, the capital, on account of its political importance, by reason of its decisive strategic value, and its being the base for the concentrated defence which we must adopt, must be capable of a prolonged resistance against any attempted investment by an invading army. In the event of a naval war, the length, breadth, and depth, the accessibility of the harbour and the many resources which it boasts, and which would make it an unique defensive base, also the fact that it forms one of the angles of the famous strategic triangle of the Atlantic, all these facts clearly point out that we should place Lisbon harbour in the most perfect state of defence compatible with our financial resources.

Any arguments here put forward in support of the above theory might be considered troublesome and superfluous, so unanimous is both national and foreign opinion on this point.

But we do not find the same unanimity of opinion in considering the necessity of defending Cascaes and Setubal, notwithstanding the fact that there are some who hold that the defence of these two places must be considered as a part, so to speak, of the defence of Lisbon, by reason of both these localities offering landing facilities to any expeditions organized

with the object of conquering the kingdom from the sea, or at any rate of carrying on operations of secondary importance, but with the object of facilitating a direct naval attack on Lisbon. There are no other arguments with any foundation, or anyway they are not known, which are convincing as to the necessity of defending those two places. The apprehensions of those who fear that Portugal may succumb to an invasion by sea are based on an historical fact, which was, however, only capable of realization by reason of circumstances which it is very improbable would ever again occur, and which we will enumerate later on. And since the times in which this happened operations of this nature have become more hazardous every day, owing to the changed conditions in the art of war, some in relation to the sea and some to the land.

The ease with which armies can nowadays be mobilized, thanks to their more perfect organization, the easy means of both ordinary and accelerated communication, and the enormous number of telegraph and signalling lines, have rendered easy the concentration of the defenders at any point where a landing is threatened. On the other hand, the tactics of naval operations and disembarkations on coasts have undergone considerable modification, through the employment of modern vessels, the use of much heavier and more accurate artillery, and the use of smokeless powder.*

Continuing on this subject, the noteworthy writer who makes the above remark (who, although writing anonymously, there is no doubt amongst specialists is none other than General Borgnis-Desbordes, of the French Marine Artillery, who recently died at the very moment when he was appointed to command the expeditionary force to China) adds, that an army corps which proposes to establish itself on an enemy's shore, and which must, from the very moment of landing, be able to obtain information, march, and fight, will only succeed in so doing by means of cavalry, horse-artillery, transport, and the various parks. To carry everything, therefore, a

* M.D.B.G., "Des Operations maritimes contre les Côtes et les Débarquements."

considerable number of transports and a convoying squadron, which will take some time to collect, will be necessary. In these times of rapid and full information, which the liberty of the press makes it difficult to suppress, none can flatter themselves that they will be able to keep secret such a large collection of ships, and consequently the enemy will be prepared. He will probably only be ignorant of the actual point at which the landing is projected, which is, however, of but minor importance. But he will know, which is already a good deal, that he is going to be attacked along his coast line, and he will also approximately know the strength of the landing force. He should at once, therefore, cause all means of transport to be withdrawn from the coast, so as to embarrass the landing troops as much as possible, should they be counting on local assistance. He will remove all supplies so as to hinder the aggressor in making up his supply columns. Finally, as he will certainly have a superiority over the enemy's cavalry, he can drive it back upon the disembarked army, thus crippling its eyes and ears at the very moment when information would be of the utmost importance.

The aggressor will thus find himself in a somewhat critical situation before even having engaged his adversary, who, on the other hand, should be prepared down to the minutest detail to give battle, being well informed and able to make use of every resource of which the country is capable.

If the defender has been able to concentrate at the point chosen for the disembarkation, the attacker's difficulties will even be greater.

“The landing of troops,” says the Spanish Colonel of Engineers, Llava y Garcia, “is a most difficult operation, because the presence of any force, even though it be but an infantry brigade, may cause enormous difficulties, although the cruisers and battleships may fire on it with their guns of medium and small calibre, the guns of the largest calibre being only applicable against coast batteries. One may confidently assert that disembarking troops will always be liable to sustain very severe losses, as happened to the Chilians at Arica, and to the French at Sfax in Tunis in 1881.”

Besides this, accidents of a purely naval character, which so easily occur on modern warships, are a new source of danger to maritime expeditions. "The most trifling accident on a man-of-war," says Lockroy in "*La Marine de Guerre*," "may jeopardize an expedition. Damage to a single ship, which may suddenly stop, or at any rate find it difficult to keep up with the rest, may endanger a whole squadron. Ought one to abandon the lame duck to the enemy, leaving him disabled on the high seas? Ought one, on the chance of saving him, to run the risk of allowing the enemy to come up, and be forced into an action under unfavourable circumstances? Fleets are always obliged to regulate their pace to suit the slowest mover, so as not to leave stragglers behind. Therefore an accident on a single vessel will suffice to delay and paralyze the squadron. They are huge moving mechanisms, which a minor accident may throw out of gear."

And are not likewise sudden and violent changes of weather to be reckoned on as possible serious difficulties to be contended with by an expedition? How many times in history have they not been completely baffled by one of Nature's furious outbreaks! Consider, for example, the fate of the great fleet which was fitted out by Philip II. in 1565, with the object of invading Ireland with 14,000 men; scarcely had the expedition weighed anchor, when it was wrecked on the Galician coast by a storm which sent forty ships to the bottom and scattered all the rest, obliging D. Martin de Padilla, who commanded the fleet, to take refuge in Ferrol with the few vessels which he was able to save from the fury of the storm.

And some years later, in June 1597, when Queen Elizabeth of England determined to break the power of Castille, she ordered a great fleet to leave her shores under the command of Lord Essex, whose vice-admirals were Howard and Raleigh, their object being to devastate the Azores, occupy the island of Terceira, and capture the Indian treasure ships; this fleet was forced to return to Plymouth after battling for four days with the elements, and was only able to set out once more in August. And these unfavourable conditions

were encountered right up to the moment of disembarkation, which caused an authoritative writer to say : " It is only at the very last moment, on arriving off the spot on the coast, that an admiral can definitely make up his mind as to whether a disembarkation is possible on that particular day. Wind which may get up, or rough sea which may have actually accompanied the fleet from outside, may cause the operation to be postponed at any moment, and under these circumstances with him rests the whole responsibility. Admiral Duperré, during the expedition to Algeria in 1830, found himself in this unenviable position, and finding the waves breaking on the beach of Sidi-Ferruch, and seeing a storm was threatening, did not hesitate to make for the open sea, and took shelter with the army in the Bay of Palma." *

And yet more recently, when General Shafter's expedition was disembarking on the coast of Cuba, a storm got up which caused the suspension of the operations for some hours, and which was partly the cause of the whole operation lasting five days and four nights, from the 22nd to 26th June, 1898. One can easily realize how grave would have been the situation if, instead of the insurgent forces of Callieto Garcia, which were assisting the operations, the Americans had been opposed by the Spanish troops.

Nor are the difficulties and dangers very much less even if the storm only gets up after the disembarkation is finished. This is shown by what was experienced by Charles I. of Spain with the expedition which he organized at Majorca in 1541, and which consisted of 20,000 men and 2000 horses. Scarcely were they landed, when a terrible storm wrecked 15 men-of-war, over 100 transports, and drowned 800 men. Having thus lost such a considerable portion of his fleet, the army being left without supplies, artillery, horses, or ammunition, Charles I. was forced to retire to Cape Matafuz, where Admiral Doria had gone to seek shelter with his remaining vessels. On re-embarking the army at that place, and abandoning the African coast, a fresh storm arose, which

* M. R. Degony, " *Etude sur les opérations combinées des Armées de terre et de mer.*"

scattered the vessels and drove them into various ports in Italy and Spain, the Emperor disembarking at Carthagena, after seeing his plans of conquest entirely frustrated on account of the state of the weather.

Sometimes, when the command of the sea is not assured, storms may result in even greater disasters. Let us consider what happened to another expedition which Philip II. of Spain organized against Tripoli, and which consisted of 150 vessels carrying 14,000 troops. First, plague; secondly, storms; and lastly, the presence of the Ottoman fleet under the command of that famous renegade Pialí, turned that ill-fated expedition into a terrible affair, from which few escaped bar the Duke of Medinaceli, who commanded the troops, and Admiral Doria, who was in charge of the fleet.

The destruction of the Invincible Armada, also organized by Philip II., was also to a great extent due to tempestuous weather, which caused him to remark: "I did not send them to fight storms!"

Many examples of this nature could be given to show how uncertain are these enterprises, from which it would seem that they should if possible be carefully avoided. The state of prostration in which the expeditionary troops usually arrive at their destination, if the weather be not propitious, is an almost sufficiently strong argument against them. The Portuguese expedition to Rousillon, which consisted of 5400 men and 22 guns carried in 22 transports, and escorted by 3 line-of-battle ships and 1 frigate, disembarked at Rosas in Catalonia in the most miserable condition. Head winds, storms, and illness had made the voyage long and trying; then, yet other hardships undergone after landing resulted in those troops joining the Spanish encampment in the same state as if they had just gone through a disastrous campaign. This, however, did not prevent their subsequently displaying the greatest valour.* The points which have been discussed would almost suffice to make an aggressor hesitate before undertaking a naval expedition, even if others yet more condemnatory did not exist.

* Pinheiro Chagas, "Historia de Portugal".

CHAPTER XII

NAVAL EXPEDITIONS AND THE COMMAND OF THE SEA

To undertake a naval expedition when the command of the sea, which has to serve as its line of communication, is not assured, besides being dangerous, is also contrary to the sound principles of military science.

The knowledge of nations, which is derived from the lessons taught by experience, has already recognized the great truth contained in the maxim that "Whosoever commands at sea, rules on land." Jomini was of this way of thinking, for in the opening chapter of his "Histoire des Guerres de la Révolution française," he considers that one of the fundamental principles of a sound European policy should be "that no one nation whose territory is inaccessible by land should be allowed to go on indefinitely increasing its naval strength." He was, of course, thinking of England.

It is undoubtedly a fact that Britain has always in the past, as in the present, considered that her political supremacy depended entirely on the superior strength of her squadrons in every sea.

When the question of fortifying the home ports was discussed in the British Parliament in 1860, there were many, speaking with technical knowledge, who attached but little importance to the proposal as a means of increasing the country's strength. One of them was Admiral Sir Charles Napier, who said: "The only safe way to prevent invasion is to be able to count always on a fleet superior to that of France, or of any other nation," and afterwards quoted M. Tierney's words: "Give me a well-found fleet and a well-filled treasury, and I will challenge the world."

Now, nearly fifty years later, one of the highest authorities on naval strategy and tactics, Admiral Colomb, in an interesting article in the *United Service Magazine*, says: "Wherever there exists a fleet for defence, whether it be great or small, which is prepared to prevent an invasion by a naval expedition, it will succeed in doing so, so long as the attacker has not at his disposal a naval force sufficiently strong to convoy the expedition and at the same time engage the defending fleet."

It was on this principle that the allies acted in the Crimea. Being doubtful as regards the command of the sea, and fearing an attack by the Russian fleet, concentrated at Sevastopol, during the disembarkation the British, French, and Turkish men-of-war split up into two squadrons, one ready to engage the enemy should he attack by sea, whilst the other approached as near the shore as possible to cover the landing of the troops.

In Italy, the same theory as that put forward by Admiral Colomb is held by the highest authorities. Major De Luca, after considering various naval expeditions, in his lectures in the Italian Staff College, condenses as follows the principles which are derived from their history:—

Firstly.—That it is always very dangerous to undertake such an expedition against an enemy without having first practically annihilated his naval strength, even though it be inferior to your own.

Secondly.—That it would be a great mistake for a country which is threatened by naval expeditions to hamper the action of her squadrons by withdrawing them into her ports, even though they be greatly inferior to the enemy; and this because, until the defender's naval forces are either destroyed or blockaded, it will be very dangerous for the aggressor to attempt any important operations against the coasts. A well-handled defensive fleet, assisted by good intelligence and communication services, ought to be able to avoid allowing itself to be blockaded, even by a much stronger enemy, for a considerable period, and this will always be time gained for the country and towards the result of the

war, seeing how difficult it would be, during this time, for the enemy to attempt operations against the coasts.

General Perruchetti, in his valuable book, "La Difesa dello Stato," confirms this same doctrine, and De Bormida, in his book, "La Difesa della nostra Frontiera Occidentale," discussing the possibility of a French expedition against the Italian coast, says: "Under the present conditions of naval tactics, the French, notwithstanding their great naval superiority, would hardly risk landing operations without having first either destroyed or blockaded our fleet."

Colonel Barone, Professor of the Italian Staff College, referring to attempts at disembarkations on a large scale, asserts: "They cannot be undertaken by the enemy until his fleet has obtained command of the sea, that is, full and absolute command, either by having annihilated the adversary's fleet, or by rendering it temporarily impotent by blockading it in some harbour. Whilst the protecting fleet of the country attacked, even when of inferior strength, can maintain itself at sea, not allow itself to be blockaded, and *retains its fighting spirit*, a landing on a large scale is too precarious an undertaking to be attempted by the aggressor."

In the United States, the doctrine which was bequeathed by Washington, when Commander-in-Chief, in his memorandum of 15th July, 1780, has not yet been questioned; in it he said—

"The Marquis de Lafayette will have the goodness to communicate to Count de Rochambeau and to the Chevalier de Ternay the following general ideas, which represent the undersigned's opinion:—

"I. In any operations, whatever their circumstances, a decisive naval superiority shall be considered as a fundamental principle, upon which shall be based all hopes for definite triumph.

"II. . . ."

The idea expressed in the above lines was the predominant feature all through the military measures adopted by the founder of American Independence, and as such appears in his diplomatic correspondence. "Money and ships" was

always the summing up of his endeavours. Money, because that has represented the sinews of war through all ages; ships, because the result of the war depended entirely on the naval strength which he could command. "No army," he wrote to Lafayette in November, 1781, "can operate decisively if its action be not accompanied by superiority at sea."

More than a century has passed, but the doctrine is still preached by modern service writers. Thus, a British naval writer, Capt. Eardley-Wilmot, in an article published in the *New York Herald*, discussing the causes of the fruitless attempts made by France to obtain the command of the sea, puts them down to her always having adopted wrong tactics, by always making a disembarking on the enemy's territory the primary object, without bothering about her adversary's fleet, or by ordering the commanders of her own to adopt a defensive attitude when face to face with the enemy, considering this to be the best means of ensuring the success of such an enterprise. The same author, in his book, "Our Fleet To-day," talking about the causes of the Italians' defeat at Lissa, writes—

"Persano's first care should have been to follow the Austrian squadron, and his numerical superiority was such that he would have been able to detach a portion of his forces for this purpose and employ the remainder for whatever else he wished. But he ignored the lessons taught by experience, which show that to justify an attack on an enemy's coast it is indispensable to first obtain command of the sea, and he committed a thoughtless blunder which only went to swell the number of the many lessons history has already taught on this subject."

A doctrine which is so revered by the high technical authorities which have been quoted in England, France, Italy, and the United States, that is, all the principal naval powers of the world, cannot be lightly doubted in our own country, now that we are trying to fix a basis for our defensive system, and especially at a time when we are considering the relative urgency of the various questions which have to be attended to.

Backed by the British Alliance, we can reckon on our maritime frontier being safe, and on having nothing to fear as regards disembarkations on our shores whilst Britain commands on the sea.

It is undoubtedly due to the efforts which she has made to maintain that dominion that she has invariably seen the great expeditions which have at times threatened her prove, without exception, utter failures. "The policy of active defence is to make the enemy's shore your frontier." England's frontiers are actually on the enemy's coast—such is the principle upon which she has chiefly based the defence of her shores.* As long as this continues, a common enemy will not be able to reach Portugal's shores.

* Gasset, "La Défense des Côtes."

CHAPTER XIII

SPAIN'S POWER IN THE SIXTEENTH CENTURY

We have carefully tried to show in the course of this study how the eloquent lessons of history confirm the rules of military science put forward in these pages and bearing on the question of national defence. We will now continue upon the same lines to counterprove the doctrine set forth in the preceding chapter, showing that the traditional enemy of our nation only attempted a naval expedition against us as a primary measure in the plan of campaign, the object of which was the conquest of Portugal; and this only when he held naval supremacy. In all other attempts of the same nature his aggressive tactics have always been directed against our inland frontier. We shall not have to go very deeply into history to make this clear.

The military supremacy of Spain in Europe began in the first years of the sixteenth century, when Charles V. came to the throne. Uniting in his person the crowns of both Spain and Germany, and still retaining under his dominion the countries now known as Belgium and Holland, master of the kingdom of Naples, governor of the new world and of innumerable and valuable colonies in every quarter of the globe, the extent of his empire was such that on it the sun was said never to set, and that war was always going on in some part of his territories, such was their magnitude.

Of the causes which gave rise to Charles V.'s continuous campaigns, perhaps the only one which really interested Spain was the necessity of keeping back the Turks, who were then at the height of their power, and who, although they had scarcely been in Europe for a century, were

already threatening it with their yoke. Masters of Constantinople, in possession of Moldavia and of a great portion of Hungary, their hosts being almost at the gates of Vienna, they were thus establishing themselves in the very heart of the continent, at the same time as, by their possessions in Morea, by the recent conquest of Egypt, and by the establishing of regencies in the Barbary states on the African coasts, they were rapidly becoming masters of the Mediterranean.

It was consequently to Spain's interest, in common with all other civilized nations, to check this new invasion of a savage and barbarous people, and also a special interest in not allowing a hostile race to establish itself on those shores, a people who did not harmonize with the Christians, who did not respect the laws which governed commerce between civilized nations, and who threatened the navigation and commerce of them all with the plagues of piracy and slavery. This fact, together with the oft-repeated necessity of having to send naval expeditions to assist distant points in his vast empire, caused Charles V. to devote much attention to his naval power. Of its magnitude we may judge from the celebrated expedition to Tunis, organized in 1553, and to reinforce which that monarch caused fifty galleys to be constructed in the Barcelona Arsenal alone. The other vessels which went to make up this famous expedition are mentioned in a letter from Emperor-King to the King of Navarre, dated 12th July, 1555, from Sardinia, and in which he mentions the galleys, caravels, "azabras" (particular kind of galley used on the shores of Biscay), rowing galleys, galleons, galleots, "escorchapines" (small sailing vessels), and caracks (war ships of large size but little speed) of which that fleet consisted.

Although the expedition succeeded in its object, which was the destruction of the famous pirate Aradino Barbarossa, it is nevertheless certain that Charles V. reached the end of his reign without having been able to keep the Mediterranean free from the threatening dominion of the barbarous people which infested it.

Philip II., ascending the throne of Spain on the abdication of his father (1555-1556), could not help carrying on that idea, all the more so because he determined to keep up the political and military prestige which he had inherited from his father.

In 1559, backed by the Pope and by the Grand Master of Malta, he organized an expedition at Messina, with the object of conquering Tripoli, seizing the opportunity when Dragut (Barbarossa's successor) was away in the interior of Africa. We will not waste time by recounting all the contretemps which this unfortunate expedition encountered, but we must draw attention to the fact that it was due to not having first secured command of the sea that the expedition principally owed its annihilation. Composed of 150 Spanish, Papal, and Maltese ships and 14,000 men, it was absolutely wiped out by the arrival of the Turkish fleet, commanded by Piali, and few escaped from the disaster.

In this unfortunate enterprize Philip II. ought to have learnt the value of the principle of first obtaining command of the sea. Thinking to make up for the great loss sustained, Philip, after further increasing the nation's naval power, joined the league which was formed at that time with the object of fighting the infidels, and of which league the Pope, Venice, and the states of Savoy, Genoa, and Lucca were members, that is to say, all those to whose direct interest it was to clear the Mediterranean of the plague with which it was infested.

With the co-operation of these various states, a fleet of 300 vessels was collected at Messina, under the command of John of Austria, the natural son of Charles V. Of these vessels, no less than 164, the largest and best equipped, were furnished by Spain, 12 galleys and 6 galleots by the Papal states, and 134 were Venetian. This fleet set out for the Levant in September, 1571, and encountered the Turkish fleet, commanded by Ali-Pashá, at Lepanto, and inflicted upon it such a crushing defeat that the Turks lost 224 vessels, of which 130 were captured by the Christian allies,

more than 90 went to the bottom, and only about 40 escaped.

The allied fleet only lost some 15 vessels.

The power of the Turks, which seemed to rest upon the life of one man, had been visibly declining ever since the death of Suleiman II. Losing foot by foot the territory which it had conquered in Hungary, the Crescent received a mortal wound at Lepanto. Ali-Pashá showed a clear knowledge of the effect of sea power, for he is said to have exclaimed at the commencement of the battle : “ To-day’s victor will be master of the world ! ”

Undoubtedly that famous victory over the infidel arms, just after they had made fresh conquests in the Levant, gave Christendom much relief and new energy, and calmed in particular the fears of Venice, which had been threatened each day with further losses, and naturally raised to the highest pitch the power and glory of Spain.

It was immediately after this battle that Philip II. determined to increase the number of Spain’s galleys to 200, and the combatants to 60,000. And the Mediterranean being now free from its barbarian masters, the Spanish monarch renewed, but this time with complete success, the attempt of 1559, organizing at Palermo, in 1573, a new expedition against Tunis, consisting of 144 large and 60 smaller vessels, on which were embarked 22,000 men. To this expedition both Tunis and Biserta at once succumbed, as they now had to do without any naval assistance. Excepting on the occasion when the conquest of Portugal was effected, and which we will refer to later, we now find Philip employing every effort in the endeavour to make war against England.

He was undoubtedly spurred on by feelings of personal animosity against Queen Elizabeth. After the outbreak of the rebellion in Flanders, it had been she who principally fomented it, helping the rebels with money and men, and encouraging the Prince of Orange and the seditious nobles ; her privateers had sacked Spanish colonies in the East Indies and captured his treasure ships ; her ministers had seized the treasure on Spanish ships in British ports, and the

Prior of Crato * had been welcomed and received with favour at her court. And as if all this were not sufficient, an expedition, commanded by her favourite, Leicester, had landed in the Netherlands and made common cause with the insurgents.

Pope Sixtus V. was using the utmost endeavours to persuade Philip to revenge Mary Stuart, the Catholic Queen of Scotland, offering one million gold crowns as soon as the Catholics should land in England.

Philip, on account of these aggressions, and also encouraged by Alexander Farnese, Duke of Parma, who at that time ruled Flanders for Philip, also the Marquis de Bazan, who had made such a name for himself in naval expeditions, persuaded him to attempt to conquer Britain. With that object there set sail from Lisbon, on the 30th of May, 1588, the famous expedition known as the "Invincible Armada," to whose composition and destruction reference has already been made, and which proved that Philip had not sufficiently taken to heart the lesson taught by the disaster of 1559, which arose out of the same causes.

The naval power of Spain only came to an end when she determined to annihilate that of Britain, which was then only in its infancy.

Never again has Spain held such naval supremacy or the resources which enabled her to undertake the numerous and great naval expeditions which were carried out in that reign. And thus is explained why the conquest of Portugal was only now attempted, being helped by an invaluable naval expedition.

* A natural son of D. Louis (the King of Portugal's brother) and a claimant to the throne.

CHAPTER XIV

THE CONQUEST OF PORTUGAL IN 1580

THIS is not the place in which to set forth a detailed account of the campaign of 1580, in which Portugal lost her independence, but it may at once be stated that there are not wanting documents which prove that Philip II.'s triumph was mainly due to previous corruption, which was ably carried out by his emissaries, sent to Portugal for that express purpose; and we do not intend, by the above remark, to throw any doubt on the military capabilities of the Duke of Alba or the Marquis of Santa Cruz, for they are acknowledged.

For the present, and the object we have in view, the only indispensable point is to consider the reasons which induced the Spanish monarch to carry out the invasion of Portugal, assisted by a naval expedition, and also to consider if the latter would have so easily attained its object had not the incapacity of our military leaders, combined with the double-dealing of those at court, contributed towards the enemy's success.

Specifying those reasons, an accredited military writer says: * "From the moment when the king ordered the army to concentrate in the valley of the Guadiana, the base of operations had to be Badajoz, and the line of operations the road which, running over the Marianica Range, through the pass of Estremoz, entered the valley of the Tagus and led to Montemór, a town situated on the banks of the river Almançor. For an army which could only count on its own efforts, the natural continuation of this line of operations

* Martin Arrul, "Campañas del Duque de Alba."

would be the road from Montemór to Lisbon, which crossed the Tagus at Santarem ; but as the fleet of the Marquis of Santa Cruz was to be a powerful auxiliary to the invading troops, it behoved the latter to go and meet it at some point on the coast.

“ The first obstacle which the invading army would encounter along this line of operation would be the fortress of Elvas, the key to the Portuguese frontier in the valley of the Guadiana, and Estremoz, which guards the pass of the same name. In addition to this, the road was extremely bad, and the districts through which it ran did not yield sufficient supplies for the army’s consumption, nor would it be politic to live on a country which it was proposed to propitiate as well as capture. Also the army was not strong enough to enable its commander to leave detachments behind at various points along the line of operations, so as to ensure the safe delivery of supplies to the invading troops ; it was therefore essential that all material, as well as food sufficient to enable them to reach Lisbon, should be taken along with the main body. The great number of vehicles which would have to be employed for the purpose would have greatly retarded the march, which circumstances clearly indicated should consist of a rapid dash at Lisbon, so as not to allow the partisans of the Prior de Crato time to organize their forces.

“ The invaders were likewise not strong enough in cavalry, which would barely have sufficed to protect such a supply train. If to these disadvantages be added the fear of the plague, which was at this time decimating the population of the Alemtejo, it is not to be wondered at that some of the leaders of Philip’s army advised that instead of proceeding by land to Lisbon, the expedition should go by sea in the Marquis of Santa Cruz’s fleet, and that if this plan were adopted enough troops should be left on the frontier to mislead the Portuguese, by making them believe in an invasion by way of the Alemtejo, whilst the majority of the King of Spain’s troops would march rapidly to Andalusia to embark at Port Santa Maria.

"But in order to reach Lisbon it would be necessary to force their way into the Tagus through the two passages by which that river flows into the sea, and which were defended by fortifications which had been recently constructed, as well as by the Fort of St. Julian. Therefore the forcing of the passage was bound to entail the loss of a few vessels.

"This plan was, however, rejected, the King approving that of the Duke of Alba, who proposed to advance along the road to Lisbon, as far as Montemór, from there to feint an attack on Santarem, and then proceed to Setubal, at which magnificent harbour they would *rendezvous* with the fleet from Santa Maria. The latter was to transport thither the greater part of the supplies and munitions required by the army, which carried with it only sufficient to enable it to reach Lisbon. Notwithstanding this, thousands of vehicles entered Portugal with the invaders. The army, reinforced by 6000 men who were to be embarked on the fleet, should be able to march on Lisbon from Santarem and arrive in view of the city at the same time as the Marquis of Santa Cruz, appearing at the entrance to the Tagus, would claim the attention of the Prior (the claimant) on the seaward side. If this should not prove successful, the army could be embarked on the fleet and taken over to the northern side of the Tagus without having to cross the river, to accomplish which the Duke lacked the requisite pontoons, etc."

Here we have set forth the motives which made a naval expedition a necessary part of the plan of invasion, and which it is unlikely would ever again repeat themselves. There are others of a political nature which could be added to them, amongst which stands out the corruption in our country which was carried out by Philip II.'s emissaries, D. Christopher de Moura, the ambassador the Duke of Ossuna, and Frei Fernando del Castilho, who were indefatigable in their efforts to win people over to their King's side.

"So cunningly did these agents work," says a Spanish writer, "that when Henry called upon the Portuguese lawyers to confirm the rights of the Duchess of Braganza, they had already given their decision in favour of Philip II."

The same happened with the military ; there were but few commanders of fortresses who did not surrender them on the mere approach of the invaders. The nobility and the clergy likewise declared themselves in favour of the Spanish King's rights. Only the crowds in Lisbon and Santarem tumultuously acclaimed the Prior do Crato as their sovereign, but of what little value these improvised soldiers were for any prolonged resistance, none knew better than the Duke of Alba, who was chosen to command the invaders.

He had learnt by experience both on land and sea.

It was, as it happens, in the naval expedition organized by Charles V. against Solomon "the Magnificent," that he had first given signs of his military genius, being one of those who were in favour of pursuing the Turks in their flight, and so strongly did he urge his opinion that the heroic defender of Buda exclaimed, "This youngster will some day be a great leader!" Later on, in the expedition to Tunis, he again gave proofs of his skill and valour in such enterprises. Perhaps it was on account of the experience he had acquired in them that he was chosen by Philip to direct the invasion of Portugal, notwithstanding the fact that the Duke was at this time in disgrace and in exile at Uceda, which caused him to exclaim to the messenger who brought him the King's commands, "Inform the King, my lord, that he is the only monarch in the world who has subjects who will return from their exile to gain for him a new crown!"

But although the capabilities of the chosen commander of the enterprise were so renowned, Philip, as though still doubtful of its result, appointed another commander no less celebrated to assist him, *i.e.* Admiral D. Alvaro de Bazan, Marquis of Santa Cruz, to whom he gave command of the fleet lying at the Port of Santa Maria in Andalusia, consisting of 56 galleys, carrying 4700 soldiers, ordering him to meet the army at Setubal to reinforce and transport it over to the right bank of the Tagus. The ease with which this dangerous operation was carried out caused amazement to those who did not know how dead was patriotism amongst the Portuguese and how great was the incompetence of those

who had not bowed their heads before the foreigner, and brought forth expressions of contempt from some who should, however, have known of these facts.

The ambassador D. Juan Morosini, writing to the Venetian Senate in 1581, affirmed that the presence of a commander with 2000 men and three or four pieces of artillery would have sufficed to prevent the landing at Cascaes, for the sea was very rough, and at the spot chosen for the landing only two vessels could approach at a time, and he goes on to say: "But even though he could thus easily have defended himself, General Menezes, who was considered the best soldier in the kingdom, and who was on the spot with 6000 men, did not realize the fact. Either through want of courage or ignorance, instead of opposing the landing he retired into the citadel, allowing the enemy to land at his uninterrupted leisure."

Thus, though the command of the sea was secured, everything points to the assumption that the conquest of Portugal by the aid of a naval expedition would have turned out as great a disaster for Spain as did the Tunis affair some years previously, if General Menezes had only had some blood in his veins, or if the command of the Portuguese galleys, which all this time lay quietly at their moorings in the Tagus, had been in the hands of such a man as Drake; this celebrated English corsair three years later made a fresh onslaught on the Spanish fleet in Lisbon, similar to that which he had previously made on them at Cadiz.

Even though the naval supremacy of Spain in 1580 was such that eight years later she dared to attempt the conquest of England, it will be seen from what has been said that Philip only undertook a naval expedition as a useful adjunct towards accomplishing the conquest of Portugal, and with the object of getting over the special difficulties which in those days beset a purely land campaign. Although the expedition was organized and carried out by two such famous commanders, with great experience in naval expeditions, it would certainly have met with disaster if patriotism had not been absolutely dead in the country.

When a few years later Spain lost her naval power through the destruction of the Armada, she never again thought of attempting the same thing in her endeavours to reconquer Portugal after our independence was proclaimed in 1640.

In the historical lessons which we have gone through our neighbour (Spain) ought to have learnt never to go against that unalterable principle of the science of war, which advises the thoughtful general always to secure his lines of communication, be they by sea or by land.

Another more recent but no less eloquent example should keep it fresh in their minds. The Spanish troops who so long and so bravely upheld the honour of their flag, through every hardship, in the Antilles and the Philippines, only lost those valuable possessions when their fleet was burnt and sunk at St. Thiago de Cuba and at Cavite. It was the loss of their naval line of communication, together with the destruction of their naval power, which succeeded in wresting from Spain those jewels in her crown which it would have been hard to do in any other way.

CHAPTER XV

EXPEDITIONS AGAINST THE COASTS OF PORTUGAL SUBSEQUENT TO 1580

THE opinion of clever men, which is confirmed by past experience, seems once more to emphasize the fact that Portugal appears to be in no danger of invasion by sea whilst the Anglo-Portuguese Alliance lasts, and as long as Great Britain maintains that naval supremacy which every one admits she holds to-day. The fortifications which it is proposed to construct for protection from a naval invasion would, therefore, considering the state of our finances, be sheer waste, and the scattering of the limited resources which it would entail would in itself be a grave strategical mistake.

Several commissions have been appointed to consider the points which, on account of their naval or strategic value, ought to be fortified. And it would seem that these investigations have resulted in the opinion that "our coasts are not divided into natural or clearly defined sections, owing to the absence of large and safe harbours," and that, therefore, from the mouth of the river Minho to Cape St. Vincent, the only points liable to attack would be Leixoes and Lisbon (and to the latter it is endeavoured to tack, as inseparable from it, the bays of Cascaes and Setubal).

In the above, if we consider it carefully, technical principles seem to have been somewhat mixed up. As a rule an expedition does not select the point at which to attempt a landing solely from its tactical side, because political and strategical exigencies have equally to be

taken into account. Of course it is necessary to consider the advantages offered by localities, both from the soldier's and from the sailor's point of view as well. But notwithstanding this, the choice of the neighbourhood at which a landing is to be attempted depends essentially on political considerations. Once the *neighbourhood* is settled on, the actual spot is then chosen for its tactical and strategical advantages, the object aimed at being to strike a line on which the enemy can offer least resistance, according to the information possessed of his strength and dispositions, the facilities for disembarkation, the chances offered for an immediate advance on the objective, and of the provisions, water, and transport available.*

The attacker must pay greater attention to the strength and dispositions of the defence than to locality. A landing in face of an enemy is very similar to an attack upon a fortress. If your adversary's strength is greater than your own, it ought not to be attempted; it is risky even when both sides are nearly equal. And as failure would entail great loss of life, the most sensible course in such a case would be to seek some other point for landing.†

Major Emslie, of the British Artillery, writing in the *Royal United Service Institution's Journal*, says: "The ease with which modern artillery can sweep a given area with a hail of projectiles is such that it ought to be impossible for troops to land in face of it, on account of the terrible losses they would be bound to suffer."

Capt. Rose, of the Royal Marine Artillery, writing in the same journal, is of the same opinion: "Quick-firing guns will be terrible weapons in the hands of troops defending a coast line, and force upon one the conviction that it will be next to impossible to land troops in open boats by daylight, unless there is enormous numerical superiority, or a very successful previous bombardment."

* Saint-Pierre, "Delle Spedizioni Maritime."

† Col. Furse, "Expeditions militaires d'outre mer." [Translated from English.]

Consequently landings must be attempted at points where the enemy is least to be feared; and history has proved what theory upholds, that a bold leader who has command of the sea does not need a "*large and safe harbour*" in which to effect a landing, which can be carried out at any point on a coast which is not absolutely inaccessible. "Stormy weather will not prevent a determined commander from carrying out a landing," says Colonel Furse, and his assertion is borne out by history. Now, although practically any beach will serve for a disembarkation, yet to commence a campaign with a reasonable prospect of success it is necessary to conquer and prepare a safe base of operations.

But the two operations are quite distinct. To mix them up even by arguing that modern armies require such quantities of impedimenta without which a landing would be difficult, is closing one's eyes to accomplished facts, and attempting to make out that bold military operations are a thing of the past, owing to the daily increasing exigencies of the art of war. In the present day, as in the past, to carry out such *coupes*, neither are many men nor much *matériel* required. The former can receive reinforcements and the latter can be made up after a base of operations has been secured by skilful pluck, always supposing that the command of the sea be assured, which is the only absolutely essential condition. General Shafter's expedition to Cuba is a good and comparatively recent example of the truth of this, because it was only undertaken after the Spanish fleet was put out of action by being blockaded at St. Thiago.

Those who go in for an obsolete strategy on land examine the coast line from one extremity to the other, carefully seeking out the spots at which a landing could be effected under the most favourable theoretical conditions, and dogmatically laying down that at these points only lies the danger, and advocating the construction of the fortifications which are to protect them. War breaks out, and generals such as the Duke of Alba and admirals like the

Marquis of Santa Cruz smile at these futile proceedings, and demonstrate by hard knocks how erroneous are such ideas.

Admiral Saint-Bon, whilst Minister of Marine, in the course of a speech in the Italian Parliament, said: "To prevent a landing at any given point on our coasts the navy is absolutely indispensable, and without it there would be no earthly means of preventing it. Naturally an enemy who is about to attempt a landing will not go and choose a spot where fortifications have been constructed, but will go on his way till he finds some undefended beach. Should that beach be held by troops, he moves quickly away, thanks to his steam power, and will without difficulty find some other suitable place, which he can occupy before the defending side has discovered his intention. There is nothing easier than to mislead the defender by feinting a landing at some given point, when you intend actually to carry it out the following daybreak a hundred miles away. *Only the navy can prevent an army from disembarking at any point on the coast.*"

Proof of the above is to be found in our own history. Although technical authorities on land have asserted that Cascaes, Lisbon, and Lagos are the only favourable points at which a landing could be effected, yet our history proves that of all the landings on our coasts since the sixteenth century, not counting Lisbon, where the conditions are exceptional, all have been carried out at places other than those supposed to be so suitable for these enterprises.

To begin with the most famous landing effected on our shores, by the very man who first gave rise to the fears of invasion by sea, *i.e.* the Duke of Alba. He succeeded in landing his troops not at that part of the bay of Cascaes which technical authorities from time immemorial have considered favourable, and which was therefore defended by numerous fortifications, but he accomplished it at a point which was considered almost inaccessible, and which was therefore likewise *unprotected*. That part of the coast which lies between the fortress of St. Julian and Santa Martha Fort was always

considered the dangerous zone ; that which stretched from the latter fort to the Fort of Guiucho being considered *difficult*, and the remainder as far as Cape Roca was thought *inaccessible*. As if to mock the strategists, however, it was at the very spot considered almost safe that the Duke of Alba landed his troops.

Employing a stratagem often used, he commenced a demonstration against the point where attack was expected, but drove home the real attack at the point which was considered unsuitable. The Portuguese troops, misled by the direction in which the Spanish ships appeared to be heading, made for the beach, which was naturally the most favourable place at which to land, but suddenly altering their course they went and carried out their purpose nearly two miles away at an extremely difficult place, but which was therefore undefended. This bold operation caused a veteran officer who had fought with the Duke in Germany, Italy, and Flanders to remark, "Sir, the audacity of this operation is more like the act of some young blood of twenty than of a general grown old in war." "You are right," replied the Duke, shrugging his shoulders, "but with such an unskilled adversary one can dare anything ; see how easily we have tricked them." Thus we see how even four centuries ago that famous leader dubbed as "*unskilled*" those military authorities like General de Menezes, governor of Cascaes, who left unprotected the spots on the coast which they considered so difficult of access "that only a look-out was necessary," so that they might concentrate the whole of their strength at the points considered dangerous on account of their accessibility ; and that want of skill cost him dear, for he paid for it with his life, being beheaded on a scaffold erected in the square of the village on the very next day after the landing.

Years after this, in 1589, when the Prior do Crato returned for a new effort to secure the throne, with the help of a British expedition, it was at Ereceira and at Peniche that he disembarked his troops, notwithstanding the fact that these places are even to-day considered totally unadapted, if

not actually dangerous, for such an operation. This expedition was large. It consisted of 26 men-of-war and 140 other vessels, commanded by Admiral Sir Francis Drake, who some writers call an adventurer, but to whom nevertheless Britain owes some of the most brilliant pages of her naval history. On board this fleet were carried 11,000 soldiers and 40,000 sailors, and they were joined in Portuguese waters by the Earl of Essex with other but less numerous forces; and it ought to be noted that at Peniche the landing was successfully accomplished although opposition was encountered.

Peniche and Ereceira served the Prior do Crato as landing places, but he made for Lisbon with the intention of making that the base of operations in a subsequent campaign against Spanish dominion. It was only when discouraged in his enterprise by not receiving as much support as he had expected (due to the twofold cause of fear of the British cruelties and of the Spanish galleons) that he embarked at Cascaes, determined to make no more attempts to gain the crown.

The British fleet of over 130 vessels, commanded by Admiral Effingham, carrying 8000 men under the Earl of Essex, which left Plymouth on 1st June, 1596, and together with the Dutch fleet had for its object the destruction of the Spanish men-of-war which Philip of Spain had ordered to be built at Cadiz, after accomplishing their mission, on their return voyage, at a point about six miles from Faro, landed 3000 men, who marched on the town, stayed there 48 hours, first pillaging and then burning it.

The British expedition to Portugal under Sir Arthur Wellesley landed close to Buarcos, which is just south of the mouth of the Mondego and close to Lavos, because Lisbon was at the time held by the French. In spite of the gale blowing at the time, and of its being asserted that in bad weather the coast at that place is unapproachable and to land impossible, yet Wellesley proved the error of this, and also how much truth there is in the words of Colonel Furse, which have already been quoted; the landing, however, naturally took some time, as it was begun on the 1st and only terminated on the 5th August, 1808.

But as soon as the troops had landed, the English general's first thought was to secure his base of operations, with which object he proceeded along the coast towards Lisbon, turning a deaf ear, and inflexible to the entreaties of the Portuguese generals, who demanded his help in order to carry out other operations. And as he progressed, reinforcements went on landing at different points along the coast, and went on swelling his numbers. It was in this manner that Generals Anstruther and Ackland landed without let or hindrance at Maceira, close to Vimieiro,* on the 20th and 21st August.

The Liberal expedition which was organized in the Azores and commanded by Dom Pedro IV., made a landing on the beach close to the village of Pampelido, not far to the north of Leixoes harbour. The landing accomplished, the king by a bold *coup* the next day gained possession of Oporto, which he immediately made his base of operations.

When the entrance to the river Douro was barred by the Miguelites establishing batteries at Cabedello, it was at a small beach outside the bar that all troops, supplies, and munitions destined for the "Liberating army" were landed, and it was likewise at this spot that the Palmella-Napier expedition landed, with the troops commanded by Colonel Dudgeon.

The small expedition sent from Oporto to reinforce the troops under Sa' da Bandeira, who were at Peniche, with orders to threaten the rear of the Miguelite troops besieging Lisbon, landed at St. Martinho.

The Duke of Terceira's expedition, which embarked on Admiral Napier's squadron and which sailed from Oporto on 21st June, 1833, landed in the Algarve on the beach of Alagôa, which lies between the fort of Cacella and Monte Gordo, and five or six miles distant from Tavira, and this in spite of the resistance offered, which was, however, soon overpowered by the fire from the men-of-war.

Marshal Bowmont, General Clouet, with their troops, who were going to join Dom Miguel, landed at Villa do Conde,

* Usually misspelt Vimiera.

and a few days afterwards also Generals d'Almer and Grival with another detachment, amongst which was the English captain, Eliot, who had been given command of the squadron which was at that time blockaded at St. Vincent by Admiral Napier.

Thus we see from these many historical examples, if we except Lisbon, none of the expeditions against the coasts of Portugal, either large or small, have ever landed at the points which it has lately become fashionable to consider as specially suitable, but always at those considered the very reverse. It is really not to be wondered at. Colonel Furse, confirming Saint-Bon's doctrine, says: "Anticipating the steps the enemy would probably take to fortify these points which lend themselves to a landing, the invader may perhaps consider it preferable to choose some other point which may not offer every advantage, but which has been left undefended by your adversary, as it is quite possible that the defenders may not only have attached too little importance to such a locality, but may not even have considered the possibility of its being the very spot selected, and will therefore not be prepared to offer any strong resistance there when surprised."

This theory seems all the more likely to be correct when we consider how greatly naval progress has facilitated operations of this nature. In 1844 the Prince de Joinville anonymously published a pamphlet, which was only considerably later traced to his pen, called *Note sur l'état des forces navales de la France*, in which, discussing the revolution brought about by steamships in operations against coasts, he showed the possibility of accomplishing a landing at *any* point, in *any* weather, and under *any* circumstances!

This was also undoubtedly Admiral Napier's opinion at the conference held at Dom Pedro's headquarters, in June 1833, at Oporto, when he insisted on his old plan, which was to force the entrance to the Tagus some favourable night, or else to effect a landing at some point between Peniche and Lisbon, so as to make a rapid march and appear unexpectedly at the gates of the capital and surprise the garrison.

Also in confirmation of De Joinville's theory, another

Italian writer holds "that landings are usually carried out on an open shore unprotected by fortifications, because the time required to silence them would rob the operation of the element of surprise, which is one of the most necessary factors for its success, and for the same reason ports or populated districts should be avoided; but once you have landed, it will then be most necessary to occupy some place to serve as a base for the troops, and also a harbour where your men-of-war and your transports can go for shelter." There cannot be much doubt left, after considering these confirmatory opinions, that the preceding doctrine is the most consistent with accomplished facts.

Napoleon, after landing on one of the Egyptian beaches which was undefended by the enemy, at once marched on Alexandria to make that place the base of his future operations.

In the expedition of 1830 to Algiers the French, after landing at Sidi-Ferruch and capturing Argel, at once transferred thither their base, although it did not offer any very favourable facilities for receiving supplies from the sea.

The Allies, when they decided to undertake the expedition to the Crimea and to destroy the port and fleet at Sebastopol, did not make straight for that place, although Larallée was of opinion that it was the only port in the Black Sea which could be turned into a great naval base capable of sheltering men-of-war. Menschikoff was expecting a direct assault, and was therefore really surprised when he was informed that the Allies had made for the Bay of Eupatoria, and had there landed on the open beach of the Old Fort. Immediately after landing, however, they set about finding anchorages where they could establish safe communication with the sea, and this they succeeded in doing, by utilizing the harbours of Kazatch, Kamiesh, and Balaklava, and with this and other objects in view they had to carry out a flank march right round Sebastopol.

The landing of the Japanese in the Province of Shantung also confirms the doctrine urged in this book. The Japanese had already captured Port Arthur when they decided on

also taking Wei-Hai-Wei on the opposite shores of the Yellow Sea.

With this object in view, they made a preliminary attack on the port of Teng-chow-Foo, 113 kilometres to the west of Wei-Hai-Wei, where they landed about 2000 men, and in this way managed to draw off in that direction a large portion of the army meant for the defence of the Province of Shantung. Immediately afterwards they again turned their attention in a new direction, appearing unexpectedly before Yang-Chang, 32 miles to the east of Wei-Hai-Wei; there they effected their main landing, and at once set about conquering a suitable base, marching with this object so rapidly that they were actually before the defences of Wei-Hai-Wei without having encountered any serious opposition. The Chinese capitulated, and the town was actually occupied before the ships lying in the harbour had surrendered.

The United States expedition to Cuba in 1898, to which we have often referred, likewise did not land at the point which was its objective, *i.e.* St. Thiago, but at other places along the coast, after misleading the Spaniards as to the real point at which they meant to land, by assembling a large number of colliers to the west of St. Thiago. After landing they besieged the town, which they captured and turned into a base for their future operations.

It is on historical lessons like these that celebrated writers base their theory that for harbours to be safe, besides being very strong on the seaward side, they must also be capable of a powerful defence on the landward side, otherwise any expeditionary force will easily capture them.

What enormous expenditure might not this necessity cause our own country! And to what dissemination of our limited resources might it not lead? Admiral Morin, rightly arguing against this tendency which is revealed in the propositions to protect either by mines or with fortifications *all* the vulnerable points along the coast, says: "No matter how much sophistry be employed, it is impossible to prove the false conclusion that the scattering of slender resources is

the cure for weakness," and adds: "If concentration is advisable for those who are powerful, to ensure success consistent with running the least possible risk, the same procedure ought *a fortiori* to be adhered to by the weak, that they may offer the greatest possible resistance to the enemy," and in conclusion agrees with Admiral Saint-Bon that the Italian shores can only be defended by the whole strength of the navy employed *in mass*. The same argument holds good with regard to the defence of the coast of Portugal. Admitting that it is my own firm belief that no power would dare to make any attempt against our coasts whilst the Anglo-Portuguese Alliance lasts, and as long as Great Britain retains command of the sea, yet, should this idea prove erroneous, we ought all the more to be able to count on the prompt and swift action of a naval force of our own, rather than on any weak fortifications which we may scatter along our shores at those points which are spoken of as suitable for landings, all the more so because experience has proved that they are not so few in number as is officially made out.

Already the enlightened author of "Marinha de Guerra" has asserted that "along the coast of Portugal there are very many beaches and small bays where an army corps could easily disembark." Brialmont disposed of the old theories when he wrote: "Nowadays coast batteries are no longer constructed, as formerly, at every spot where a landing was possible, nor at every salient from which you can command some passage or flank a beach." And such being the case, it is waste of time even to discuss a subject which has become past history in the art of war. To construct fortifications at Cascaes and Setubal, simply because they are places at which an expedition *might* land, would be an anachronism which no authority on modern principles would approve.

CHAPTER XVI

THE NAVAL DEFENCE OF OPORTO

THE only reason put forward to justify the fortifications destined for the defence of Oporto is the liability to bombardment of that town.

Though it is admitted that "the bar of Oporto is shallow and leads into a narrow, tortuous, and variable channel, and cannot be entered by vessels of any great depth," at the same time it is stated that the proximity of the town to this same bar which gives access to it "forces one to consider the possibility of bombardment, or at all events how one can prevent the town being shelled from a favourable position."*

No other reason has been advanced to justify the erection of the fortifications in course of construction on the north side of the bar of the Douro, and consequently we need only discuss the value of this one reason. It can be questioned from two distinct points of view—first, from that of modern naval customs of war as practised between civilized nations, and which is the only element contained in the theory; secondly, by considering the probabilities and consequences of a bombardment. Considering the matter in its twofold character, it should not be difficult to show that the reason adduced is not sufficient to warrant the expense which the proposed fortifications will entail.

Though the French *Jeune Ecole* and also a few writers of other nationality not only allow, but even advise fleets to resort to the bombardment of undefended coast towns,

* Extracts from the propositions laid before the Chamber of Deputies in 1901.

arguing that "it is necessary to disregard the sentiment created by modern customs of war, and return to the logic which in reality governs the world," and endeavour in this way to strike at every point affecting the adversary's property and wealth, which are the sinews of war.* Yet one may be permitted to doubt that such a barbarous doctrine will ever be put into practice. Even if humane considerations did not forbid it, one would think that fear of reprisals would prevent the employment of such tactics.

The bombardment of Valparaiso in 1886, and of the Russian Black Sea ports in 1877-8, were the last cases of the sort, and they were severely condemned by the whole civilized world. If the bombardment of Valparaiso had been Mendez Nunez' only accomplishment he certainly would not have left his name deeply engraved in the pages of history as a bold and skilful sailor. It was not there but at Callas that he expressed that worthy sentiment: "I would rather honour without ships, than ships without honour." In the second case the bombardment of the defenceless towns of Gondanaki, Otchemtchiri, Soukhourn-Kalé, Eupatoria, Theodosia, and Anada by the Turkish ironclads was on a par with their state of civilization.

In opposition to these ugly facts, history can fortunately produce others which create a more authoritative precedent, and which ought to be remembered. Take an act of respect which was shown to our own country; we will quote the following extract from the official report made by the French Admiral Roussin describing his entrance into the Tagus, which account is confirmed by our own writers: "Once past Belem I ordered firing to cease, as the town proper begins above that point, and was consequently unable to defend itself."

Years afterwards, when the Allied Fleet, on 22nd April, 1852, attacked the fortifications at Odessa, the instructions received from their respective governments, *i.e.* that all private property, and in fact everything which was not a public building or fortification, should be respected, were strictly

* Aube, "De la guerre navale."

adhered to. The French Admiral Hamlin, reporting how these instructions had been carried out, described his action as follows:—

“At 4.30 p.m. the defence was silenced and Odessa was at our mercy; our object was attained, and therefore both Admiral Dundas and myself ordered our respective ships to cease fire . . . we could not have dreamt of wrecking either the town or the commercial harbour of Odessa, in which lay much shipping of every nationality. The representative of the Czar would have had to bear the sole responsibility of any violation of the customs between civilized peoples; it was therefore only the Imperial Arsenal, the naval harbour and the war vessels in it, together with the batteries protecting them, that Admiral Dundas and myself decided on attacking and destroying.”

In the same strain the latter wrote in his despatches: “The city of Odessa and the harbour, which sheltered shipping of every nationality, were not damaged, in accordance with his Majesty’s instructions with regard to respecting private property.”

The fleets in the Baltic on the same occasion received similar instructions. On the 16th April, 1855, Admiral Hamlin, who was then Minister of Marine, addressed Admiral Penaud, who commanded the squadron about to start north, in these words: “I think it hardly necessary to remind you, Admiral, that amidst the difficulties and stress of war the rights of humanity should be respected, for the honour of France and of her navy. You must endeavour to strike Russia through her fleet, by intercepting her convoys and destroying her commerce, but avoid, as far as possible, attacking defenceless towns, and preserve private property from any damage whose object be not the destruction of the enemy’s naval or military resources. These are, Admiral, the general instructions which I consider it my duty to give you.”

In the campaign of 1870 France once more acted on these humane principles. Colberg was known to be the only port in the Baltic which could be attacked by her fleet on

account of the shallowness of the water, which in most places prevented the ships from approaching the coast. Towards the end of August, after blockading the other ports, Admiral Bouët-Willaumez sailed to that place, but discovered that although surrounded by fortifications the town was undefended, and the Red Cross flag was flying from its buildings. The French admiral could easily have bombarded the town, but chivalrously withdrew without firing a single shot.

Again, in 1882, when bombarding Alexandria, the British acted in the same spirit; their fire was concentrated on the defences, the few shells which reached the town being due to errors of aim, Admiral Seymour's battle orders of the 10th June being: "The object of this attack is the destruction of the works and batteries which face the sea."

In the naval manoeuvres of 1890 the following were amongst the instructions issued by the British Admiralty for the guidance of the commanders taking part in them: "Attacks on undefended coast towns will not be permitted, since they would have no influence on the general result of a war."

In the Chino-Japanese war of 1894, in which naval operations played so important a part, the principle of respecting undefended inhabited localities was observed by both belligerents, and this is all the more noteworthy because humane instincts are not exactly characteristic of Eastern methods of making war.

When in 1902 Great Britain and Germany decided to take common action against Venezuela, they instructed their squadrons to blockade the coast; but as the necessity arose for stronger action yet only fortified ports were blockaded, the *defenceless* ones being left alone.

The examples which we have quoted are nothing but the natural outcome of modern ideas respecting international usages. Commenting on the "Instructions for the Conduct of the American Armies in War," drawn up by Dr. Lieber by request of Mr. Stanton, Minister of War during Lincoln's presidency, which lays down that before commencing a bombardment sufficient notice should be given to enable the

women and children to be placed in safety, Bluntschili writes in "Le droit international codifié": "This custom is bound up with the very idea of war, which is a struggle between two nations and not between two individuals. To endeavour to pay every possible consideration to the latter is the distinctive characteristic of civilized warfare. Thus, in order to protect the great centres of population from the dangers of war, they are frequently declared 'open towns,' meaning that they are undefended and should therefore be considered as 'non-combatants.'" And also: "*Open towns* which do not offer resistance may be occupied, but they must not be unnecessarily bombarded."

This same doctrine has been included in almost these very words in Art. 25 of the Hague Convention of 1899. And although this diplomatic understanding only refers to operations on land, yet one naturally infers that the signatory nations will feel themselves conscientiously bound to refrain from naval bombardments of unprotected towns, all the more so because to act otherwise would be a backward step in the progress of humane naval fighting.

Even if humane principles were not worth considering, the ordinary selfish interests in war would recommend the adoption of this line of action. Fleets, from the point of view of their naval interests only, must in the same way as armies on land disregard secondary operations, so as to concentrate their strength and combine their movements for the purpose of securing the command of the sea, which is their main object. Now, the bombardment of a commercial port can only be considered as an operation of secondary importance, unless it has to be undertaken with the object of assisting the action of the army on land at some decisive moment of very great importance.

But even considering this hypothesis, a supreme commander should weigh carefully, on the one side the influence which the bombardment of some great commercial port may exercise on the result of the war, and on the other the effect which the waste of time and the possible loss or damage of the ships employed may have on the purely naval side

of the war, and upon which will depend the command of the sea.*

The same doctrine is found in the writings of the patriarch of modern tactics, Admiral Aube, who was such a strong advocate of the bombardment of defenceless commercial ports, on the principle that, "as riches are the sinews of war, every blow at the enemy's wealth, and especially any blow which hits him in the very source of his wealth, becomes not only legitimate but actually obligatory." And he did not make this statement thoughtlessly, as some have sought to prove; rather did he make it in conformity with rules and principles which absolutely harmonize with those already put forward. According to his theory, this war of destruction, otherwise condemnable even under this very aspect, would depend entirely on the command of the sea and the absence of adversaries who could retaliate for these international aggressions. His words are precise and clear—

"We must be prepared to see the fleet which succeeds in securing the command of the sea; if its adversaries refuse to give battle, devoting its attention to attacking and destroying coast towns, be they fortified or not, peaceful or warlike, burning and ruining them, or at least forcing from them heavy indemnities. This was the method of procedure in olden times, and will have to be resorted to again."

That is to say, this line of action could only be employed against nations who, having lost command of the sea, yet remain powerful on land, driving back and defeating their adversary and attacking him in the very heart of his country, or who perhaps, having gained command of the sea, would not dare attack him on land, as might easily happen in a struggle between Great Britain and France. Apart from such exceptional cases, it is unlikely that in any future war fleets will dare to outrage the public opinion of the whole civilized world by bombarding defenceless towns. To quote one of our own writers—

"Undefended towns have international custom to protect them; they can only be bombarded for refusing to surrender.

* Albert Grasset, "La Défense des Côtes."

A bombardment of this nature would have little or no strategic importance, for however great might be the damage done to the town, its influence on the result of the struggle would be nil. Under the conditions, therefore, a bombardment is considered an operation to which no serious object, glory or profit is attached. And, moreover, the vessels engaged in the act would run considerable risk of being attacked by torpedo-boats, which ought not to be forgotten. Nevertheless, such a bombardment may have its advantages, especially against a colonial town, if taken by surprise, say, and if the inhabitants are demoralized or wanting in military spirit; but these are surely the only circumstances under which this system of attack could by itself crush the defence.” *

In the same way the Italian writer Saint-Pierre advises the immediate dismantling of all fortifications at commercial ports.

“ It would be politic, wise, and economical to do this,” he adds. “ Wise, because it would thus be acknowledged that a fortified commercial port may be bombarded by day or night, without the enemy’s ships running the risk of receiving a single scratch, even if the land defences be powerful ; politic, because one might cherish the hope that the enemy would not, either from humane or motives of interest, bombard a defenceless town, even though the first of these be a false argument in war ; and it would be economic for obvious reasons.”

Another authority of even greater weight, Admiral Colomb, after arguing that fleets are the best coast defences, adds—

“ In summing up, let me say that I am not in favour of permanent works at purely commercial ports, because I cannot get over the conviction that it is the lines of communication to those ports which should be protected, and as the ports are useless if those lines are not free, to defend them is equivalent to defending the ports themselves. By instinct I would merely place a few light batteries at the

* Book I. “ Manual of Coast Artillery ” (Portuguese).

entrance to those ports to guard against surprise by torpedo craft; but on further consideration I cannot reconcile even their construction with my views."

The considerations which we have run through, supported as they are by lessons from history, prove that the reason put forward to justify the construction of batteries to protect Oporto is most insufficient, and that those same batteries would be more likely to provoke than to prevent a bombardment.

And now we will consider the advisability of constructing these batteries from the second point of view.

If the principles of international custom, strengthened by the lessons of history, were not sufficient to dispose of the fear of the bombardment of an undefended town, such action is strongly condemned by up-to-date tactics, which only admit this line of action when a fleet has nothing to fear from a powerful adversary, that is, after it has secured command of the sea. And even under these circumstances it is considered an operation of a very secondary nature, of the profit derived not being in proportion to the effort employed, and therefore productive of neither glory nor profit.* As a matter of fact, for a bombardment to be successful it is astounding what a quantity of projectiles have to be expended.

General de Blois estimated that at least one shell must fall per 10 square metres, or 10,000 per square kilometre, of a city for it to be considered properly shelled.

The Germans in 1870-1 worked on the principle that two siege guns firing 400-500 rounds over a period of eight to ten days were necessary per 1000 inhabitants—202,112 shells were fired into Strasburg.

The three French ironclads which bombarded the Fort of Kinburn on the 7th October, 1855, fired 3000 shells before it surrendered.

Admiral Grivel maintains that it will be necessary to fire 100 shells per hectare (about $2\frac{1}{2}$ acres) to cause any palpable

* Borgnis-Desbordes, "Des Operations maritimes contre les Côtes et les Débarquements."

damage. To bombard an arsenal like Spezia, say, which covers some 90 hectares (225 acres), or Portsmouth, covering about 100 (250 acres), about 9000 or 10,000 projectiles would have to be fired, which that distinguished sailor considers beyond the powers of any modern fleet.

M.D.B.G. (General Borgnis-Desbordes), pointing out the exaggerated ideas which are common regarding the destructive effects of a bombardment, supposes, as an example, that a fleet succeeds in throwing 6000 shells into a town (and this he considers a hard feat to accomplish), and he goes on to suppose that out of every six projectiles one destroys a building, which he also considers hardly possible, as a large percentage would naturally fall in the streets, in gardens, and other open places. Under the above conditions in a town, say, like Marseilles the number of houses destroyed would not be more than one per thousand! This supposition is certainly confirmed by an example worth mentioning. In 1803 the British bombarded various ports in the Channel between Granville and Calais. Napoleon gave orders that the owners of the damaged buildings should at once receive compensation, and it thus became known that the amount of damage done was only estimated at 45,000 francs!*

On 29th February, 1880, the Chilean men-of-war *Angamos* and *Huascar* bombarded the fort and town of Arica, prolonging the attack till the 6th March, that is, for seven whole days, at the end of which they retired. The damage down to the town was almost nil, and the casualties amongst the population and garrison put together were a dozen killed and wounded. On the 10th May the same two ships, together with the *Amazonas*, the *Blanco-Encalada*, and the *Pilcomayo*, appeared before Callas, which they shelled for four hours—309 shells were fired, but the damage done to the town, forts, and batteries was so insignificant that the operation was considered worthless.

Bride, author of "The Spanish-American War," says that the so-called bombardment of Porto-Rico cost the Americans some £50,000, which amount is out of all proportion to the

* Grasset, "La Défense des Côtes."

results obtained, which consisted of a few casualties and some insignificant damage to the defences and town. Moreover, a bombardment usually takes place when the attacker is absolute master of the sea, for if a defending naval force were still about, capable of arriving unexpectedly on the scene, the bombarding fleet might find itself forced to face the defenders with its magazines exhausted, and therefore deprived of its principal means of action. A comparatively weak squadron with a few torpedo craft would suffice to gravely endanger a greatly superior force surprised in this critical situation. At the finish of the action of the 11th June, 1882, the British ships which had bombarded Alexandria were almost out of ammunition; the *Sultan* when she ceased fire could not have continued the action an hour longer, according to the accounts of her commander, and the *Inflexible* only had 10 rounds left for each of her big guns. The battle of Lissa in 1866, the bombardment of Callas in 1886, and the battle of the Yalu in 1894 all came to an end through want of ammunition. It is therefore not at all likely that an adversary who is at all conscious of his responsibilities will come and make an attempt of this nature on our coasts, and run the risk of being caught in the act, either by our own navy or by the squadrons of the nation who undeniably has command of the sea. As long as she retains this command, the fleets of other countries will surely not run the risk of weakening themselves by attempting operations which can exercise no influence on the final result of a war. A direct assault on our shores is not probable, unless it be made in conjunction with an invasion by land, so as to attain some special strategic object; but even in this case the enemy could not be certain that his squadrons might not be unexpectedly attacked, and a defeat at sea would always entail serious results on land.

Under any other circumstances the bombardment of a point on the coast, unless it be that chosen as a base of operations, cannot produce sufficiently important results to justify our paying more attention to our coast defences at the cost of neglecting our inland preparations, even if we

stood alone and without outside help. Only those points which possess real strategic importance are worth defending, and they should be strongly fortified, so as to be able to withstand a really powerful attack, and in which the enemy may stake the number of vessels which he considers necessary to succeed in the object in view.

To fortify positions which it is known are incapable of being properly protected only with the object of "forcing the enemy who attempts to shell them to do so from a less favourable position" does not appear to be sound, especially when one realizes that the town thus inefficiently protected would lose the rights which are enjoyed by undefended towns, and would assume the very onerous responsibilities of a fortified place.

Arguing in favour of this same theory, a well-known Spanish Artillery officer wrote: "Fortunately for humanity's sake, history does not contain many examples where defenceless towns have been shelled; but on the other hand there are many which had to suffer bombardment through possessing useless and impotent batteries and guns which attracted and brought on danger instead of averting it."

CHAPTER XVII

THE DEFENCE OF LEIXOES

WE have endeavoured to show that fortifications are unsuited to commercial towns because they change their character from "open" to "defended" ports. And we must once more emphasize the no less serious consequences entailed, *i.e.* the increased number of garrisons required, with the consequent scattering of the nation's forces. Even if the fortifications possess any importance (and if they do *not* there is no *raison d'être* for them, as they could not succeed in their purpose, and only serve to bring on themselves the enemy's fleet and invite the bombardment which it was their object to avert), the circumstances which we have considered show that real sound reasons to justify the proposed fortifications to cover Oporto are still wanting. And this even if the command of the sea were not in the hands of an ally, which fact alone is sufficient to do away with all probability of any bombardment.

Those fortifications, however, are not intended only to defend Oporto; they are also meant to protect Leixoes. "The defence of the port of Leixoes, and the protection from bombardment of Oporto, are two separate problems, but they must be merged into one when considering the defence of Lisbon from the north and sea." * This other reason for the necessity of the proposed batteries is therefore clear and unanswerable, but its foundation ought to be considered. What advantages from the military point of view does

* Extract from the propositions laid before the Chamber of Deputies in 1901.

Leixoes possess that require fortifications to protect them ? Leixoes is an artificial harbour, "to enter which is not always easy, and whose shelter is far from being safe on all occasions."* It would be difficult, in fewer words, more eloquently and with higher authority to condemn the military worth of this harbour, and consequently the fresh expense which its defences would entail. But there is another document which serves as even better evidence of the defects so summarily mentioned. It is the report of the Commission which was appointed to "undertake the improvement and look into the various requirements which appear expedient in connection with the port of Leixoes," and describing the pros and cons it says: "This process (the transfer of cargo into decked lighters towed by tugs or *vice versa*), although primitive, is the only one which can be employed on account of the steamers not being able to go alongside the quays, and besides being expensive and wasting time, is often risky or even impossible, for it frequently happens that when vessels are unable to enter the bar of the Douro on account of the state of the weather, they are likewise unable to take in or discharge cargo at Leixoes. Even vessels anchored inside the harbour cannot count on the shelter necessary to load or unload their cargoes. A very high sea gets up inside the harbour when there is a strong wind or bad weather, and there are occasions when it would be dangerous, and others when it is dangerous and even impossible, to come alongside the ships in the harbour. With a strong N. or N.W. wind the sea breaks on the inner side of the southern arm of the breakwater; with a S. or S.W. wind the rollers coming in at the mouth of the harbour raise a high sea inside, which breaks either on the inner side of the northern breakwater or on the Leça beach."

This description from an unimpeachable source clearly shows what Leixoes is worth either as a commercial port, or as a naval base, which comes to much the same. The

* Extract from the propositions laid before the Chamber of Deputies in 1901.

above report describes it as an "extremely bad commercial port."

As a port of refuge, the Commission's report is certainly not so pessimistic. "A vessel inside the harbour," it says, "*if securely anchored, can consider herself safe and under shelter; she will roll, but there will be no danger, if there be nothing with which she can come into collision; she will, however, under these conditions be unable either to take in or discharge cargo or passengers.*" The provisos in italics would almost be sufficient to discount the reality of the shelter obtainable in Leixoes even if the following fact were not still fresh in many minds, *i.e.* the award of a high distinction upon a naval officer for the skilful and gallant way in which he *succeeded in saving his ship, which was at anchor inside the harbour during a gale!*

Leixoes might indeed have possessed military worth if the original plan had been carried out. It is generally known that it was proposed to join the harbour with Oporto and the river Douro by means of a canal. But the proposal was set aside as too uncertain and costly, and none of the later proposals have included this idea, which would have provided much safer shelter.

One of our highest naval authorities in urging this plan wrote: "In the north the harbour of Leixoes might serve as a suitable defensive base, *if it be the entrance to an inner harbour.*"

By converting the river Leça which flows out at Leixoes into an inner harbour, we might yet succeed in providing a suitable sheltering harbour for our own or our ally's fleet, if the nation's finances permitted it. But this great work has never got beyond the stage of an ambitious dream, and we may therefore place it outside the range of practical politics.

Leixoes, however, either as it actually is, or as the entrance to an inner harbour, is not capable of being defended even if we were to mount suitable guns upon its quays or mine the entrance. A squadron taking shelter inside could easily be damaged by another some distance

out at sea, which would suffer little or no damage from the defenders' guns.

"Any large object," says Admiral Aubé, "which is less than 7000 metres away can be shelled and set alight, without the attackers running any serious risk from the coast batteries which defend it."

In confirmation of this we might consider the case of the *Angamos* and the *Pilcomayo*, who with the *Huascar* shelled Callas at a range of 6500 metres; later the bombardment was continued with the assistance of three other ships. The *Huascar*, which was armoured, approached to within 5000 metres, and the others, which were wooden vessels, kept at a range of 4000 to 7000 metres, and none of them suffered any damage to speak of. With the 300 shell which they fired they inflicted considerable damage on the three Peruvian vessels anchored in the harbour.

The same would no doubt happen to any squadron which sought shelter in Leixoes, which possesses no guns on its breakwaters and whose anchorage, being a long way in front of the batteries with which it is proposed to defend it (Plan I.), would therefore present a target at a much shorter range for the enemy's guns than the coast artillery would have, and thus increase the latter's disadvantage. At the present day the guns mounted in coast batteries are usually of smaller calibre than those carried by men-of-war.* In batteries the guns are worked and loaded by hand; on war vessels there is machinery capable of lifting enormous weights, and therefore the calibre of the guns can be increased without any difficulty. Moreover, naval guns possess higher muzzle velocity than those of land batteries. The reason is simple. In ships fighting against other ships, their guns are placed at approximately equal heights, from which it follows that they can only be attacked on the flanks, *i.e.* through their armour, and for this heavy projectiles of high velocity are required; hence the large calibre and high muzzle velocities of naval ordnance.

On the other hand, coast batteries, usually at a greater

* Sabatier, "Etude sur l'Organisation de la Défense des Côtes."

elevation than the ships, attack these through their decks, hence their need of a less flat trajectory, and the possibility of employing guns of smaller calibre (varying from 19-27 centimetres) and with a much lower muzzle velocity. It is only siege guns which are equal to naval guns as regards calibre and high velocity.

Thus we see the danger to which a squadron taking shelter in Leixoes would be exposed from the guns of an enemy's fleet, which the coast batteries, on account of their distance away and of the small calibre of their guns, would find it impossible to beat off. For this very reason it is asserted in our "Manual of Coast Artillery": "It is now admitted *without question* that fortresses and fortified ports, towns and arsenals are only safe from bombardment when they employ in their defence not only their fleet, but the batteries which protect them in carefully selected positions."

The harbour of Leixoes, being in an *advanced* position, cannot therefore be properly covered by batteries. The cost involved by the construction of such works will therefore be not only profitless but even prejudicial, as will be clearly shown when we deal in the next chapter with the glaring examples with reference to the defence of the Bay of Lagos.

CHAPTER XVIII

THE DEFENCE OF THE BAY OF LAGOS

THE foundations for the arguments put forward to prove the necessity of defending the Bay of Lagos (Plan IV.) can be stated under two heads: 1st, because the locality has from ancient times been a strategic centre for naval operations; 2nd, as being the only port which can be utilized by a fleet for replenishing its supplies and taking shelter between the Tagus and the Guadiana.

In the course of this study we have attempted to prove that even if reasons such as the above be unquestionable, yet they are not enough by themselves to justify the expenditure of the vast sums of money which would be required to fortify that bay according to present-day standards, even should it lend itself to the purpose. The principles which now guide naval strategy and tactics have entirely revolutionized those which formerly governed them.

Certainly in the rowing and sailing eras of naval history the Bay of Lagos possessed considerable importance, which only ceased because circumstances changed entirely, and because it now lacks those points which are required of a naval base. As late as the beginning of the nineteenth century the squadron which we kept about the Straits of Gibraltar to protect our commerce against the Algerians used Lagos as its base. After Junot was driven from Portugal in 1808 and the Regency restored, one of the Prince Regent's first acts was to despatch a squadron to put an end to the Algerians' audacious ravages and drive them back into the Mediterranean, and this squadron also made Lagos its base of operations.

In the expedition to the Algarve, Lagos was the port chosen by Admiral Napier as the base of operations for the Constitutional fleet, and from where he set out to give battle to the Miguelite fleet, and to which he returned with his prizes after the battle off Cape St. Vincent. But all this was in the sailing period of naval history, and it cannot therefore be adduced as a sound argument at the present time, which is governed by entirely different tactical laws and principles. It is just because it cannot at the present day be considered either a safe harbour as regards shelter or as a suitable one at which a fleet can take in supplies, that it lacks the two most essential characteristics of an important strategic centre. In the first place Lagos has never been a harbour in which one could place absolute confidence as regards the shelter it affords. A naval officer who is a recognized authority on the subject, referring to its natural characteristics, says—

“The harbour of Lagos may be considered a fair port in which to take shelter; from the S.W. round to the E. by the N. it is a fishing and coasting harbour, and has advantages over all others in the Algarve, as it is easily entered without the necessity of taking a pilot and regardless of tides.

“In summer time a strong E. wind in the bay is very rare; but the swell caused by that wind blowing in the Straits is sometimes felt; in winter, however, the harbour is frequently disturbed by south-easterly storms. . . .

“Important Notice.—At the very first signs of storms from the E. round to the S.W. by the S., any vessel lying in Lagos ought at once to weigh anchor and make for the bar of Portimão, and cross it at the first opportunity. Small vessels can take shelter in the inner harbour of Lagos and up the river Alvor. Those vessels which find they cannot get over the bar of Portimão must make for the open and lay to, or else make for the W. and be prepared to round Cape St. Vincent to the N. if the violence of the storm obliges them to do so, and with the

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knowledge that if the storm works round to the S.W. they will only obtain shelter either in Setubal or Lisbon."

Another equally able officer * says: ". . . the Bay of Lagos has sufficient depth for large vessels, but is quite open to the S. and E.; therefore to turn it into a fortified port most important works would have to be undertaken, and it would require the construction of a fortified breakwater to protect the shipping."

The first of these two officers, in compiling a guide to navigation in general, has described the natural features of the bay from the commercial and peaceful point of view; the second, on the other hand, writing a technical book, has simultaneously pointed out the two great points which are wanting, and which prevent that harbour from assuming any military importance; neither would it afford sufficient protection from the weather to a squadron seeking shelter, nor could it successfully keep off an enemy attacking it, since it is "an open bay easily entered without the necessity of taking a pilot and regardless of tides," as is described by Da Silva in the words previously quoted. Similar ports can only afford a certain amount of shelter, as Pereira de Mattos says, when they are protected and enclosed at their wide entrances by stout and properly fortified breakwaters, which must be sufficiently far forward to effectually protect the anchorage.

The Bay of Lagos likewise cannot be considered a suitable port at which a fleet can take in supplies, because for that, not only does it fail to afford sufficient shelter, but also the *matériel* and resources required to supply modern war vessels with all they require to enable them to carry on their mission; water and provisions, as was pointed out in an earlier chapter, being, one might almost say, minor necessities of these powerful engines of war.

Examples taken from foreign countries will easily show how much truth there is in these arguments, for there are many bays and other naval localities which though they could, on account of their hydrographic conditions, be more

* Pereira de Mattos.

easily defended than Lagos, yet are condemned to remain undefended through the recognized impossibility of protecting them solely by unaided artillery fire. Italy offers examples worthy of special mention. And it must not be thought strange that we turn to that country for preference in seeking arguments to uphold the doctrines contained in this study, for French authorities admit that Italy can be taken as a model in questions of coast defence, and also in those of a mountainous frontier, for they are two points of vital importance to her, and have been studied with particular attention.

What has taken place with regard to Genoa (Plan III.) ought to serve as a great lesson to those attempting to solve on sound lines the defence of a bay.

Genoa is Italy's most important naval port, possessing a large population and much wealth. It is situated in the centre of the arc formed by the gulf of the same name, and exactly at the point where it is nearest to the course of the river Po, quitting which you leave behind you the whole of the upper valley of this river. Its ravines, which communicate with the plain to the north, would enable an enemy to turn the position at Alexandria, and in the event of hostile operations on the Po is the most convenient point of concentration for all the Italian forces which may be destined either to occupy the chosen line of defence or to attack the invader in flank or rear. On account of its great strategic importance being practically the key of Piedmont, Italy has from very early days spent vast sums in attempting to render Genoa impregnable both from land and sea. But in spite of the money spent, Genoa has only managed to uphold its reputation for impregnability on the land side, and has remained open to the attacks of its enemies on the sea side, notwithstanding the numerous and powerful fortifications which have been constructed. And the fortress is to-day considered "a colossus of iron, with feet of clay"—the latter represented by its sea front. A few lines will explain the reasons.

The Bay of Genoa is roughly two kilometres wide by

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about one in depth, and it was therefore quite open as regards storms or attack of an enemy's fleet. To prevent this two breakwaters were constructed, one on the E. and one on the W., about 540 metres apart; one was fortified by three batteries and the other by two. Besides these works there were the following:—

- (a) The battery of Lanterna, at the promontory of St. Benigno, west of the town; it is casemated, has two tiers of fire, and commands the outer port.
- (b) Two batteries, north of the above, which command the sea in front of the entrance between the breakwaters.
- (c) A battery facing the end of the passage.
- (d) A new battery, south of the town.
- (e) The battery of Cava, a new work which substitutes the old one, which existed on the high ground bearing that name, in which are mounted seven 24-centimetre guns.
- (f) The battery of Strega, south of Cava, mounting 12 guns.
- (g) The battery of Bisagno, where the old lines terminate.

From the nature of these numerous works one might suppose that Genoa could consider itself well protected against an enemy's attack. Far from it, however; all authorities on the subject are agreed that the city and the ships inside its harbour are in danger of bombardment, because, amongst other reasons, the configuration of the coast line does not allow the defences to be pushed forward sufficiently to prevent it. The same drawback has been pointed out in the foregoing chapter with regard to Leixoes.

Colonel Mariani, of the Italian Artillery, discussing the possibility of preventing the bombardment of Genoa by means of coast defences only, openly declares it to be impossible, and says—*

“We must realize that fortifications are stationary and that ships are not; that the latter's artillery is capable of

* Mariani, “*La Questione de Genova.*”

throwing a shell 12 and 15 kilometres, whilst that of coast batteries can only range some 11,000 metres. An enemy's fleet can therefore count on a zone of four kilometres in depth, in which it can be stationary, or manœuvre about as it chooses, and shell the town, without exposing itself to any risk whatever."

Bollati de Saint-Pierre also says: "The enormous advances made by naval artillery, which at a maximum elevation can throw a shell 20 kilometres, will nowadays enable vessels wishing to carry out a bombardment to take up a position in which they will be absolutely safe from the defenders' guns, because coast artillery, with but few exceptions, can only range up to about nine kilometres, and there is not much can do even this."

For this reason, in spite of the many proposals to construct heavily armoured and strongly fortified breakwaters in advance of those already in existence, so as to protect Genoa from bombardment, the general concensus of opinion, especially amongst naval men, inclines towards General Ricci's theory, which is "that Genoa should be turned into an undefended port, as it would be most difficult and costly to make it safe on its seaward side."

Colonel Sironi, another authority on the subject, thinks the same: "With the modern range of artillery this system of fortification (on land) is not altogether satisfactory, because the works of the fortress can be shelled from various points, either on the Bisagno or on the Polsevera side. Nevertheless, if Genoa had nothing to fear from the sea, it would be capable of a stout resistance, even under present conditions.

"But when we consider its weak side, *i.e.* that towards the sea, one begins to think seriously if it would not be better to turn it into an 'open town,' and simply convert the fort of Sperone into a strong citadel for the sole purpose of commanding the roads of Polsevera and Bisagno, which lead to the Po, and denying their use to an enemy who was in possession of the town." *

* Sironi, "Geographie Strategique."

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Admiral Saint-Bon also considers that Genoa "is exposed to bombardment from all sides, without there being the slightest possibility of protecting it by means of artillery, in case of a war with a maritime nation." And this was his opinion, expressed as Minister of Marine.

Bonamico also holds "that the naval defences may perhaps delay the occupation of the port, but will never succeed in preventing it altogether, even if millions be spent," and asserts "that naval officers *unanimously* declare that Genoa is indefensible on the sea side, and that the addition of every possible means of defence, both on the east and on the west, will not prevent a successful bombardment and the consequent occupation of the port."

The French writer Grasset arrives at the same conclusion: "Ports which are open bays have to be defended by an extensive line of forts, this disposition favouring the attack, as it admits of the full development of strength and the concentration of fire on certain works. On the other hand, the defence is at a disadvantage as regards unity of action and command."

The opinions of such good authorities ought to make us reflect, especially those who refer to the impossibility of defending Italy's principal commercial port.

In truth, sea fronts cannot nowadays be defended by a superiority in quantity and quality of artillery only. If naval defence could be reduced, as it was in the past, to a duel between the batteries on land and those afloat, it is possible that some of the proposals made, as regards the defence of Genoa, might have solved the problem. But its defence is to-day essentially a hydrographic problem, and it is the absence of natural advantages of this particular nature which renders Genoa, as well as other similarly situated ports, indefensible.

The Italians, to prevent an enemy's fleet from getting possession of the Gulf of Spezia (Plan II.), defended its entrance by two armoured forts, and between them, in six or seven fathoms of water, they constructed a breakwater 2300 metres in length, leaving passages free to navigation

of 350 metres on the west and of 170 metres on the east. But for this permanent and artificial obstacle to fulfil the object for which it was intended, it should have been built at a distance sufficient to prevent bombardment, considering the situation of the arsenal and the range of modern artillery. Now the breakwater is only 4200 yards from the arsenal, which would be sufficient were the latter differently situated. As it is, however, Spezia could only be considered safe if detached forts were built out at sea in front of the mole.

The value of Cherbourg's defence is, for the same reasons, very uncertain (Plan V.). The mole at Cherbourg is very much nearer the arsenal than the one at Spezia, and therefore does not fulfil the purpose for which it was built. It was completed in 1853, when armoured vessels had not yet made their appearance and when artillery had attained nothing like its present perfection, therefore it was built only $2\frac{1}{2}$ kilometres in advance of the arsenal. Maldini, drawing attention to the dates when the Cherbourg breakwater was finished and that at Spezia commenced, says that the remoteness of the dates justify the former's construction, but not that of the latter, "which cannot be done away with, which does not shelter the arsenal from bombardment, and which does not therefore fulfil its purpose."

The differences of opinion between military and naval officers in some countries with regard to the military value of certain localities have arisen simply because they have tried to stick to traditions which are nowadays inadmissible in face of the advance in naval science.

Apropos of this, it is interesting to notice the difference of opinion in Italy with regard to the Bay of Vado (Plan VI.), which resembles Lagos in so many points, especially as regards its accessibility, being, like the latter, an open bay, as can be seen by comparing Plans IV. and VI.

On the foundations that "history shows that in the attacks on Genoa the blockading squadrons have always sought an anchorage at Vado; that it was the point chosen by Napoleon to start from on his immortal campaign of 1796; that it is close to the base port, where the enemy's fleet must

concentrate before commencing operations; that it is not very far from the spot where the Maritime Alps are lowest, and where they open out to lines of communication of strategic importance without equal, such as are the ordinary Carcara-Savona road, and the Savona-Acqui railway," the Committee of National Defence proposed to turn it into a naval fortress, its value being further increased, according to another theory, "by the necessity of occupying the bay, not only to prevent the enemy doing so, but to prepare an indispensable base for our own fleet." Any one taking the trouble to compare these reasons with those put forward by the people in our own country, who insist on the necessity of fortifying Lagos, will discover that these are nothing more than an echo of the former, which only adds weight and increases the importance of what follows.

In Italy the opinion in military departments, as well as of military authorities and technical writers belonging to the land service, were agreed that Vado ought to be turned into a naval fortress and base for the navy, whilst naval officers and authorities were *unanimous* in denying either the importance or necessity of defending it. The persistence of the military writers in insisting on the necessity of Vado for the fleet's operations, and the equally strong opposite opinion of the sailors, simply arose out of the different ideas concerning the duties and mission of a fighting fleet. Thus the argument put forward, "that it was necessary to protect and strengthen Vado, first because it might be used as a base by our own ships, and secondly because the enemy might make use of it for the same purpose." The sailors replied that such an argument was a dismal relict of obsolete principles. "Napoleon I," they added, "was quite right in converting Vado, Ajaccio, St. Florencio, and Villafranca into bases of operations for his sailing fleet, and to arm Vado with good batteries to keep from its anchorage the British men-of-war cruising off the coast. Nowadays, however, Vado does not possess any of the defensive or strategic characteristics required by a naval base. It is subject to surprises of every nature. Its anchorage cannot be protected in any way. It

is absolutely open to bombardment, it could not even be considered a tactical point for the polycentric system of defence, as it possesses none of the conditions favouring the useful employment of a flotilla. Any squadron anchoring in Vado, prior to operating against a more powerful enemy would be lost. Moreover the bay does not even offer good nautical characteristics, for no fighting fleet could stay there with the wind blowing from certain quarters."

But if Vado is not a good base for us, continued the sailors, how can it be a good one for the enemy? And at once attacking this question, they proved that, "in a military sense, Vado could not be used as a harbour by the enemy, unless he held absolute command of the sea. So long as the Italians were able, with a few fast ships, to threaten an enemy's fleet at anchor, and perhaps only protected by a few lines of torpedoes, an enemy would indeed be rash to allow himself to be surprised in that treacherous anchorage, and we ought even to be pleased if he should fall into the trap and make it his principal station, and thus unpardonably repeat the mistake made at Ancona by the Italian fleet and which ought to have cost it so dear, if the enemy, who was wisely concentrated at Fasana, had acted as they should, in face of such a blunder."

If these arguments had been employed actually as referring to the Bay of Lagos they could not have been more to the point, except that the latter, being a much vaster bay, the drawbacks attributed to Vado apply with even greater force to Lagos.

What has been written would seem sufficient to incline one against the idea of fortifying Lagos, but there are yet other facts and considerations which strengthen one further in this opinion.

Patiens * writes: "Certain ports clearly have nothing to fear, but they are few; they are those situated at the extremity of some vast bay or estuary, and where defences can consequently be well in advance. Our naval bases with the exception of Cherbourg are thus situated. . . .

* "La défense national et la défense des Côtes."

"Cherbourg's breakwater is only two kilometres from the arsenal ; a squadron at 4000 metres' range would, therefore, only receive but slight damage compared to that which it could inflict. Cherbourg arsenal is perhaps the only one in the world whose destruction would be possible, or even easy." Referring to commercial ports, the same author says : "As for our commercial ports, they are nearly all absolutely open towards the sea, and the most formidable batteries which we might construct might perhaps inconvenience their bombardment, but not prevent it ; they are in exactly the same position as a strong fortress reduced to its inner lines, deprived of advanced works.

"The only practical means of protecting these towns from bombardment is the navy, which corresponds to providing them with floating advanced works."

The same argument is recognized by Brialmont, when talking about four important commercial ports. "Although Venice and Marseilles are defended by numerous works, yet they are not safe from bombardment from the sea, for that, in the same way as at Naples and Odessa, forts would have to be constructed out at sea, which would entail difficulties and expenses before which the Italian, French, and Russian Governments have recoiled."

Now, Lagos is exactly similarly situated. Being an open bay, it is subject not only to all the dangers urged as regards Vado and the French commercial ports, but to others even greater than are Genoa and Cherbourg, which are protected by numerous and powerful batteries and fortified breakwaters. Not all the resources of fortification collected along its shores and at its entrance could prevent a bombardment of the town and harbour.

This doctrine is nothing new. Captain Mahan, in "The Influence of Sea-power upon History," explaining the strategic situation of the contending parties during the War of Independence, referring to the bases of operations chosen by the British, writes : "South of New York the attempt might have been made to capture the bays of Delaware and Chesapeake as naval bases of operations, but the width

of the entrances, and the absence of convenient and easily defended points, the dispersion of the army, which would be entailed by the necessity of garrisoning so many points, and the bad climate during a great part of the year, were all so many more reasons for abandoning the plans in which important parts were to have been played by those bays, in the first stages of the campaign."

Thus we see that large bays which are easily entered, to which so much importance is attached by certain military officers, are not so highly thought of by naval men. Consequently, wherever the question of coast defence is considered together with modern principles of naval science, we find those officers agreeing with the sailors. For example, Colonel Seco, a Spanish Artillery officer, making a study of the defence of which the island of Majorca is capable, referring to its two largest bays, Alcudia and Palma, whose entrances are roughly 15 kilometres wide, considers them *for this reason* indefensible. And when discussing the bay of Polleusa, which is divided into three parts, of which the innermost is very shallow and the outermost most unsheltered, says: "This bay would not afford much better protection to a squadron than would Alcudia or Palma, because if the former are too open to prevent an enemy from entering them, the latter does not guarantee enough shelter from storms."

Brialmont, in his "Progrés de la défense des états et de la fortification permanents depuis Vauban," published in 1898, says that the only bays which ought to be defended by forts and batteries are those which are enclosed, and in which vessels can take shelter from storms, or after a battle, and he strongly deprecates fortifying open bays, which can only be defended by scattering artillery along their shores, which he considers a futile proceeding. The Commission on the defence of the French littoral assembled in 1859 under the presidency of a Marshal of France, was reassembled and continued its studies after the war of 1870 to 1871, it also expressed itself strongly against defending bays which were only suitable for taking shelter in: "As for the points which

it was formerly customary to endeavour to prevent the enemy from securing, so as to prevent his having any facilities for interfering with the coasting commerce, also bays and creeks which were fortified with the same object, their defence ought as a general rule to be discontinued. . . . The modern principle of concentrating all means of defence nowadays necessitates abandoning all secondary positions. The latter will be more effectually protected by a movable defence, *i.e.* the fleet and the army, and by whatever rapid means of transport shall have been prepared."

And later on, in 1887, dealing once more with the question, the same Commission again urged this doctrine, advising that the localities which ought to be protected by fortifications were the military ports, the estuaries of the Seine, the Loire, and the Gironde, and the harbours of Hâvre and Marseilles. "As for secondary localities, they will be better protected by the fleet and by mobile troops." There are two modern examples which confirm this theory.

During the Brazilian revolution of 1893, the Insurgent battleship *Aquidaban* was taking shelter in the vast bay of Santa Catharina, when it was entered unexpectedly by the Governmental flotilla, composed of the torpedo-gunboats *Afonso-Pedro*, *Pedro-Ivo*, *Palvado*, and *Sampaio*; the latter succeeded in firing a torpedo, which obliged the *Aquidaban* to run herself aground. The *Afonso-Pedro* also got off two torpedoes, which, however, took little effect.

Towards the end of January, 1895, the remnant of the Chinese fleet defeated at Yalu (September, 1894), consisting of the *Ting-Yuen* and *Chen-Yuen*, 7500 tons, another battleship of 3000 tons, and some torpedo-boats were lying in Wei-Hai-Wei. In spite of the fort of Len-Kung-Ton which commanded the entrance to the harbour, Admiral Ito ordered his torpedo flotilla to attack them inside the harbour. The attack was carried out on two successive nights, 4th and 5th February, so successfully that on the 12th the Chinese admiral was obliged to surrender, and immediately afterwards committed suicide. These examples certainly confirm the

theory propounded by the authorities we have quoted, and Admiral Aube further holds that: "Any squadron taken unawares by torpedo craft at night will probably be annihilated." A fleet lying at anchor in Lagos Bay would be infinitely more open to attack than was Admiral Ting's at Wei-Hai-Wei.

"In future wars," says Saint-Bon, "with torpedo-boats which can keep out at sea in the most inclement weather, and which can consequently appear at any moment, anchorages cannot be counted on. War ships will have to be continually on the move, and therefore burning coal. . . . In war time one will have to depend on harbours which are not only fortified, *but also enclosed*, in which to replenish supplies and material."

That Lagos may serve as a temporary anchorage for a fleet, especially in summer time, is not denied; but that is not sufficient reason for fortifying it. No matter how many cruisers such a fleet might possess with which to cover its resting place, it would find it difficult to protect itself from a bold *coup* of the enemy's torpedo craft; its crews would have to be constantly in a state of preparedness and tension, which would greatly discount the advantages possessed by the place as a sheltering harbour. There is generally no idea of the cruel strain of a prolonged and constant state of vigilance. Collingwood thus described his state in 1805, when he had been ordered to watch the Rochefort fleet: "I have only been able to take one proper night's rest during the last two months; this constant patrolling seems beyond the powers of human endurance. Calder is like a skeleton, completely worn out, and Graves, from what I hear, is in much the same state." And the strain has certainly not diminished with the change in naval material.

From an order issued by Admiral Baird after the British naval manœuvres of 1888, in which his fleet had to blockade Bantry Bay for ten days, we can gather the state to which the crews of the blockading vessels were reduced at the end of that time: "The torpedo-boats after ten days' incessant work began to show signs of the effort; the officers and men were

very much done up, and could only have kept up the work for a very limited space of time without becoming absolutely incapacitated. Both officers and men, who had worked almost continuously day and night since the commencement of operations, began to show signs of very great distress. And although they would not hear of taking any rest, it is certain they could not have carried on many more nights, and the blockade could not have been carried on without their assistance."

The *New York Sun* graphically described the nervous tension of the commanders and crews of the vessels taking part in the blockade of St. Thiago, on account of their continual dread of a night attack by the Spanish torpedo-boats. There were some really extraordinary incidents. One of the American ships very nearly sank one of their own colliers ; another did likewise with one of their own cruisers ; a third opened fire on a train on shore, and finally another commenced a heavy fire on the dark entrance to a cave on the shore, mistaking it for a torpedo-boat ! And therefore it is by reason of the great fatigue imposed upon the crews, on account of the incessant watchfulness required during operations, that the military ports destined for their shelter must possess conditions of real security, so as to relieve the crews of the vessels seeking shelter in them of the everlasting strain of high tension.

Moreover, the proposed fortifications at Lagos, to be fairly safe from the danger of being turned by troops landed in the neighbourhood, would necessitate a comparatively large force being kept within reach.

In 1854 the Russians constructed numerous batteries to defend the Straits of Kertsch, and in the following year Admirals Bruat and Lyons were ordered to force them. The operation did not present any very great difficulty, but knowing that the batteries were open works, the admirals determined to land a portion of their forces at the entrance to the Straits, which forced the Russians at once to evacuate all the batteries, after having buried the guns, and this simply because they could not count on the necessary troops to co-operate with them.

It is an eloquent example. For us to go and scatter our troops along the coast at the expense of our main fighting army would simply be inviting such another fiasco. It is a serious dilemma, and the only solution is to leave the defence of our coasts in the hands of the navy. As for the argument which we have borrowed from Italy, namely, that the fortification of Lagos is necessary in order to deny its use to the enemy, would it not be a great mistake to try and prevent him from obtaining possession of a point which we refuse to occupy ourselves on account of its danger? Would an aggressor be able to transform Lagos into such a safe harbour that he would have nothing to fear from a bold stroke, either of our own or of our ally? Could we prevent the whole Algarve from being occupied by the enemy, even if we had made Lagos impregnable both from land and sea? If there be only one answer possible to these questions, which is forced on us by the unalterable laws of logic, then we may say of Lagos what Bonamico remarked of Augusta and Syracuse in Sicily: "A fascinating picture, but a disappointing reality!"

CHAPTER XIX

THE SAFETY OF COASTS LIES IN NAVAL SUPREMACY

THE historical arguments and examples given in the early chapters of this book have exposed the error and the danger of defending a coast line by works scattered promiscuously along it, and in the immediately preceding chapter I think it has been shown pretty clearly that on our own coast Lisbon is perhaps the only harbour which, on account of its strategic situation and its adaptable conditions to the principles of modern naval tactics, is worth spending large sums upon. What we must guard against, however, is the inclination to extend its defences to neighbouring localities of very doubtful importance, according to the principles which we have explained.

It is time to put away the ancient and worn-out theories which in the past have governed the principles of coast defence. Steam, armour, high explosives, and the many other strides in scientific and industrial progress adapted to the modern art of war, have greatly altered the circumstances governing naval attack and littoral defence. The absolute inviolability of a coast line can only be attained by naval supremacy, and much more markedly so in the present than in the past. It has been that supremacy, we must again emphasize, which has placed Great Britain in that position of safety which she has occupied for centuries, and still occupies. It was that supremacy which enabled her to pursue and defeat in every sea the fleets of her enemies, blockade their coasts, wrest their colonies from them, capture their merchant vessels, ruin their commerce, and at the same time develop her own.

It is now some centuries since a clever statesman, who was an even abler sailor, recognized the influence which naval supremacy must exercise in the defence of nations. It was at the time when Philip I. was organizing the great invasion of Britain. Some statesmen advised Queen Elizabeth to devote the whole wealth of the treasury to organize the army, so as to "fight the enemy on shore when he disembarked." Sir Walter Raleigh hotly contested this plan, insisting on the necessity of organizing a fleet to fight the Spaniards at sea and to prevent their ever approaching the coast. "I maintain," he said, "that the best defence is to prevent the enemy from ever putting his foot on our soil. . . . As for the question as to whether England can prevent the enemy from landing, without the aid of her fleet, I most emphatically say that she cannot, and that therefore it would be most dangerous to try the experiment. For the moral advantage which the enemy would gain by a first victory, and the corresponding disheartening of the defenders after a defeat, might entail the most serious consequences. . . . I say that without the help of the fleet it would be impossible to prevent the enemy from landing wherever he chooses; the same would happen with France or any other nation, unless every creek, bay, and port is defended by a powerful army."

Public fears and opinion perhaps have forced the British Government to scatter defences along the coasts, but the opinion of Sir Walter Raleigh continues to be shared by the highest authorities in that country, who are convinced that "the best way to prevent invasion is to defeat the enemy at sea, and destroy his naval power as quickly as possible,"* particularly because "without the co-operation of a naval force, no naval base can be of any value."†

The value of naval supremacy in operations which have taken place with insular or peninsular countries has been so brilliantly described in the works of universal repute, which have made famous the names of Mahan, Callwell,

* Colonel Furse.

† Mahan, "Lessons of the War with Spain."

Colomb, and Bonamico, that it would almost be presumption for me to attempt to enlarge on the same question ; but it is always useful to remember historical lessons which have occurred with your own country.

The second of the above writers' says : " Of the relation between command of the sea and the success of operations on a coast, a better example cannot be found in history than that of the struggle which Great Britain, with the aid of Portugal and Spain, had to carry on against the gigantic forces of Napoleon, south of the Pyrenees." During the Peninsular War the allies were actually able to face and drive back the armies which Napoleon had sent to the Peninsula under his most famous marshals, *because* the coasts were safely guarded by the British Navy, as were the successive bases of operations captured in the course of the campaign, as were also their various lines of communication across the sea.

To the naval supremacy, which Nelson conquered for Great Britain by hard fighting, is due the fact of the British Army being able to maintain itself in the theatre of war during its many vicissitudes for several years. The reconquest of the Peninsula was therefore effected, thanks to the intervention of an omnipotent fleet; without the command of the sea neither would the campaign ever have been undertaken, nor would it have been possible to carry it on and bring it to such a glorious finish, in spite of the greatest efforts of both Portuguese and Spaniards to retain their respective independence. During the Constitutional struggle fate hung in the balance for a considerable time, in fact, until Dom Miguel's squadron was defeated off Cape St. Vincent by Sir Charles Napier. It was only when the command of the sea had been lost that the Miguelite cause became hopeless. " The famous battle of the 5th June, 1833," says a well-known historian, " deprived the Lisbon Government of the valuable assistance which up till then had been rendered by the men-of-war, and at once made fortune swing round from the Miguelite to the Constitutional party, because this act of almost unique military skill and courage not

only gave it command of the sea and assured that on land, but had more influence on public opinion than up to that time had been exercised by Dom Pedro's name." During the Civil War in 1846-7 the Council of Oporto never found their cause in danger whilst they had full liberty at sea. Neither the battle on 22nd December, 1846, at Torres Vedras, in which most of their best troops were made prisoners, nor the fact of their leaders being deported to Africa, weakened the insurgents' cause. The popular movement was only considered quelled on the 31st May, 1848, when an expedition destined against Lisbon, consisting of one corvette, three steamers, and four transports, carrying 4000 men, set out from Oporto, and were immediately captured by a British squadron under Sir Thomas Maitland, which at once proceeded to blockade the mouth of the Douro. As soon as they had lost their naval line of communication the insurgent movement at once collapsed.

These examples, taken from our own relatively recent history, are sufficient to show that in this corner of Europe, just the same as with all other peninsular or insular countries of the world, the command of the sea is absolutely essential to enable them to prolong any struggle. It was only because she was the more powerful at sea in 1870-1 that France was able to oppose the invaders as long as she did.* After Sedan, although she possessed men, yet she had neither arms and ammunition, nor was she able to equip the corps which were then organized. The patriotic mission undertaken by Gambetta would have been frustrated if the German fleet had been able to blockade the French coasts and had not been itself shut up in the Baltic and North Sea, watched by the squadrons of Bouët-Willaumez and Fourichon. And for that reason all the material required to enable them to prolong resistance was able to be imported from abroad. "France's naval supremacy in the Mediterranean," writes Major Callwell, "exercised much more influence on the struggle than the squadrons cruising in the North Sea and the Baltic, because France, in common

* Colonel G. Furse.

with the British and Ottoman Empires, has to keep much of her military strength in distant localities, with which they can only communicate by sea. Under these circumstances a nation cannot develop its whole strength on land unless its fleet has command of the sea."

We should find ourselves thus situated in the event of war, nor can we doubt that in any future international conflict the fortune of our arms will be intimately connected with the triumph or downfall of Britain's naval strength. As Bonamico says: "It is necessary to fight against the dangerous illusion of protecting and defending everything, and of easily attaining great results with limited resources; also to guard against allowing the country to get into that frame of mind which does not realize what it can accomplish, nor perceive what ought to be done, which is not strong enough to temporize, nor has the courage to rise superior to circumstances." In view of these considerations we must realize that there exists only one hypothesis, and it is fortunately a probable one, which is that on the continuation of Britain's power at sea will depend whatever resistance we may be able to offer in an international struggle. Consequently, if we wish to arrive at a practical understanding, without illusion or foolish bragging, in considering the attempts which may be made on our coasts, we must consider our ally as exercising her full naval power, which she surely will, for only under such circumstances could we take part in the struggle.

CHAPTER XX

CONCENTRATED NAVAL DEFENCE AND THE SAFETY OF THE COAST

WITH much common-sense, backed by great knowledge, Commander Mahan says: "A squadron is the best coast defence, not that fortifications have ceased to be absolutely necessary, but because the destruction of the enemy's fleet is the best possible defence."

As a matter of fact, fortifications are useful, but only if not *too* numerous, and if restricted to localities at which they are really indispensable.

Clarke, in the same strain, says: "Every time that new fortifications are suggested, one hears it said, 'If they do no good, anyway they can do no harm.' This, however, is not so. Every point fortified beyond that which is absolutely necessary in war is not only useless, but may be the cause of much harm. And in peace, besides the expense involved by its upkeep, it greatly complicates the services."

Colonel Barone thinks the same. He says: "Fortifications are two-edged weapons: undoubtedly useful when one does not expect too much from them, and if their number is not exaggerated; otherwise they are not only useless, but even prejudicial. In the way of fortifications, anything which is not absolutely necessary becomes a hindrance."

There is much truth in these opinions. Tactically, unnecessary fortifications are the cause of much loss of *personnel* and initiative in field operations. Morally, they reduce the patriotic spirit of the nation, and dishearten the army, when it sees them captured by the enemy. Financially, they are the cause of much useless expense; and

from the strategic point of view, they deprive the field army of valuable elements.

The exertions of the highest authorities are nowadays devoted towards reducing to a minimum the number of fortified localities. And that minimum is, in the case of coast defence, very restricted, when compared with the ideas of only a few years ago. The bases or centres of operations for the fleet are the points which, all are agreed, must be fortified, because they may have to trust to their own defences entirely, for certain longer or shorter periods, according to their importance, without the help of the navy, which must be free to carry out all strategic or tactical duties which may be assigned to it.

In the course of the evolution of coast defence, the number of those bases has gone on being reduced, as the theories relative to the defensive capabilities of fleets have changed from the polycentric, or system of a small radius of action, to the unicentric, or extensive radius. During this transformation two radical points assert themselves, which may be shortly described in the following manner :—*

(a) Naval strategy ought to rely upon many fortified points, with squadrons to defend them.

(b) Naval strategy ought, for a foundation, to have one central strategic base, from which the fleet will protect the whole of the coast line for which it is made responsible.

The first of these formulæ corresponds to the polycentric system, which is still favoured by some nations. It consists in dividing up the coast line into sections, to each of which are told off certain naval units. The headquarters of each section are at the principal fortified harbours, and in these are stationed the more powerful vessels. According to the importance of the sections which have to be defended, these bases are classified as first, second, or third class, and are usually defended by not very formidable works, which may or may not be supported by troops. At these points there are always stationed vessels capable of going out to sea in any sort of weather, so as to get information, and there will

* Bonamico, "La Defesa Maritime dell' Italia."

also be a sufficient number of torpedo-boats to act energetically against an attacker. The selection of these points which are to serve as bases for the naval forces, depends on their hydrographic and general suitability.

Thus Austria possesses one principal station per 257 kilometres of her coast, and a secondary one to every 150 kilometres. Italy, one principal one per 414 kilometres, and one secondary to every 305.

This system of naval defence corresponds exactly to a chain of fortresses along a land frontier, and possesses identically the same drawbacks which are acknowledged in the latter. Hence the adoption also for coast defence of the concentrated system contained in the second formula, which is the unicentric or system of a large radius of action. In the latter the ships are concentrated at the bases of operations, and guard the whole extent of coast apportioned to them by operating swiftly and energetically against the enemy wherever he attempts aggressions.

As far back as 1878 Admiral Morin wrote a brilliant treatise in which he advocated the unicentric system, and in which he said—*

“When one has to deal with easily accessible coasts and with an open country, fortifications ought not to be constructed with the narrow and puerile intention of actually turning the enemy from his purpose, just as one might force a river into a certain channel, or build a wall round a property; they must be constructed with the object of giving support to the movable and active forces which are the chief factors both in attack and defence.

“And thus it follows that the points on the coast which ought to be fortified are only those which from their position, nature, and qualifications may be converted into bases for the fleet; it is advisable to turn those few localities into really formidable places, by making for the purpose all efforts, which some people would like to see devoted to attempts at a general protection. These localities should be able to beat off the attacks of concentrated naval forces by

* Morin, “*La Defesa Maritima dell’ Italia.*”

their own unaided exertions, and it would obviously be wrong to maintain that they should count on the help of the ships to repel the attacker. As for the rest of the coast, either the fleet is able to protect it, or its defence is impracticable. This dilemma may not appear hopeful, but is none the less true."

Admiral Bonamico says: "The scattering of naval forces along the coast, either in squadrons or flotillas, as was adopted in Italy, and which has lately been recommended by writers who display more ardour and zeal than knowledge and wisdom, is the worst of all systems of defence at a time when boldness, mobility, surprise, and strategic concentration are the predominant characteristics of military requirements."

The Italian Minister of Marine, Benedetto Brin, advocating the advantages of an extensive radius of action as opposed to the small or polycentric system, argued: "How many ships would we not require to enable us to offer an effective resistance everywhere? One gets up to a pretty high figure if one realizes that it is not only necessary to defend some 4000 miles of a coast on which there are very many points where a landing would be easy, but also to protect at least ten of our principal ports. We must remember that if we mean to localize the defence at each one of those ports, they must all be able to offer a certain amount of resistance, not only against one or two ships, but against a more or less powerful squadron. Let us take, for example, any particular one, because, if we except Venice and Spezia, the conditions of all the others are very much the same. We will therefore take Genoa. How many "Hotspurs" * would be required for the protection of such important interests as are collected at that place, exposed as they are, for want of any natural protection, to every form of attack? Four, at the very lowest computation. Now, if we multiply 4 by 10, and add a few as a reserve, we get a total of 50. If we also consider that a modern "Hotspur" would

* An old English ironclad mounting heavy artillery, though not now considered first class.

not cost less than 7 or 8 millions (francs), we find that we should have to construct material to the tune of some 350–400 millions, which is about four times the amount of what we actually possess, and which greatly exceeds the sum which the Government proposes to spend on an armoured fleet, together with its auxiliary vessels. And what would be the result of all this? We would still remain weak everywhere, because we would be depending on four ironclads only, whatever might be the strength of the enemy, and four ironclads which would always be inferior to more powerful vessels. This system of defence, which from the military point of view is most inefficient, would from the financial side be ruinous."

In opposition to the drawbacks of the polycentric system of defence, Benedetto Brin thus explains the advantages which would be obtained by a fleet of sixteen modern warships acting on the large radius system—

"Our naval frontier is very extensive, but an enemy would not dare to undertake any serious operations against any of our ports either fortified or not, and would even less risk attempting a landing, if he knows that there is a fleet at sea of sixteen ships like the *Duilio*, say, ready to attack him, and that this fleet, by means of its fast cruisers, its scouts, and telegraphs, is watching all his movements. It is the first and important advantage of mobile defence, and at the same time the best condemnation of local defence, because the mere presence of a fleet at sea will guarantee the safety of the coasts for any length of time. Consequently, in a defensive war the commander of our fleet, having naval and commercial ports in which to refit and take supplies within easy distance, could always count on his sixteen vessels, whereas the attacker's fleet, even if it belonged to a navy twice as powerful, would scarcely be able to muster an equal number of ships at the point of operations." This doctrine, which was first started in Italy by Admiral Saint-Bon, is not only upheld by the most distinguished naval officers of the present day, such as Mahan, Colomb, Bonamico, and others, but also by generals

with world-wide reputations, like Brialmont and Ricotti. The latter, who reorganized the Italian army, advocated in the Chamber of Deputies the necessity of defending their coasts by means of concentrated naval power, with a force of argument worthy of being quoted—

“ . . . I have finished ; but,” he added, “ allow me to say a few words as a general with reference to naval matters. In studying the possibilities of war, we must take the navy into account. Italy is long, very long ; the sea is on her right and on her left ; it is necessary therefore that we consider our naval capabilities. If we suppose a war with a nation powerful at sea as well as on land, it is clear that we would have to concentrate all our continental forces in the valley of the Po. Nevertheless, to do so it is also clear that we should be obliged to abandon the peninsular portion of our country to the naval attacks of our adversary.

“ But how can we make up our minds to abandon so many and such important towns as Rome, Naples, Palermo, Liorne, Florence, and Messina ? Without a considerable navy to defend us, or to protect our coasts from landings attempted by a first-class naval power, we shall be obliged in view of this danger to leave at least two army corps in the peninsula. Thus, instead of being able to assemble 330,000 men in the theatre of operations, we could only count on some 280,000. This reduction might be fatal at the commencement of the war. Does this not strike you as being a serious, even a *very* serious question for us soldiers ? If we had four vessels like the *Italia*—I say four so that we might have the certainty of always being able to keep two at sea—if we had four such ships we would not need to worry about the peninsula ; we might be easy concerning the threats of any squadron, the bombardment of our coast towns, or an attempted landing . . . with the *Italia* and the *Lepanto* at sea, skilfully commanded, I consider we need have no fear of a disembarkation being attempted. There is the question. If we can count on such vessels we can safely assume the responsibility of only leaving some

10,000 to 15,000 militia to defend the peninsula, whereas if we have not got those two ships to protect the central portion of the state, it will be necessary, as I have before said, to employ some 50,000 to 60,000 men drawn from our first line of defence for its protection. Will the enemy's fleet bombard Ancona, Palermo, Naples, or Genoa? No; whilst the *Italia* and the *Lepanto* are at sea the enemy's ships would never dare attempt such a thing, because from one moment to another they might become the bombarded instead of the bombarding party. Turn to American history: what did the *Alabama* succeed in doing? Hers was the greater speed, and therefore she became mistress of the sea; forty monitors and other vessels were unable either to capture or put a stop to her depredations.

“ . . . the truth is, whatever people may say, that naval and military questions are intimately connected, and that is why I get somewhat hot when discussing them. The facts which I have to-day laid before you have been studied, weighed, and calculated; they are not idle assertions. We cannot work out a sound plan of campaign without taking the fleet into account.”

We find the same opinion disclosed in the speech General Caprivi, the German Chancellor, made in the Reichstag in 1892, when he said—

“ If I remember rightly, in 1870 three divisions were told off to defend the coasts: the first at Bremen, the second in a central position at Hanover, and the third, if I am not mistaken, at Hamburg. These divisions were only freed when the French fleet abandoned our waters, their withdrawal being due to the influence of events which are not likely to recur. Then those three divisions were taken to the frontier, and took an active part in the rest of the campaign and in the triumph of our armies. If such facts are to happen again in the future, it is to be hoped that our fleet will defeat the enemy's, that it may not be necessary to keep any of our effective strength tied to the coast. And by defeating the enemy's ships, our navy will become a

decided and direct contributor towards the triumph of our arms."

The completion of the canal connecting the Baltic with the North Sea has for its main object the defence of the German coasts by facilitating the concentrated action of the fleet, which might be called upon to face in opposite directions in the event of war with both France and Russia. Explaining this, Count von Dürkheim, writing in the *Norddeutsche Allegemeine Zeitung* of 7th February, 1892, says—

"Our fleet will have to face in two opposite directions. It is important that from the beginning it may make use of its splendid situation on interior lines between the two adversaries. Its operations ought to commence as soon as war is declared, so as to forestall the enemy. . . . It is necessary to apply in a new way the principles which were the foundation for our victories in 1870-1 . . . our fleet ought to be in a position, from its organization in peace, to at once command the Baltic, before our adversaries have left their ports even ; they must be blockaded in them, or, if their squadrons are already at sea, they must be beaten in detail before they effect a junction. Having done this, our fleet must steam to encounter the French before the latter have had time to round Jutland and enter the Baltic."

Commander Stenzel also insists on the necessity of the German navy destroying the enemy's fleet as the safest way of defending the coasts. If the former were beaten, he holds, the coast would not be safe, because there are many points not defended which are suitable for disembarkations. The annual manœuvres have often proved it, and the Russians in the Seven Years' War on various occasions effected landings on the low and inhospitable beaches of Colberg. And he also says : "The opportunities which a fleet having command of the sea would have of harassing an extensive coast line like Germany's are enormous. It appears unexpectedly at this point or that, it can burn, bombard, carry out real or feigned landings, cut communications, destroy shipping, commerce, and harbours. Briefly, it can cause enormous material damage without exposing itself to the least danger ; it can keep coast

towns in a state of apprehension, and checkmate a large number of effective troops, if the country is not to be left unprotected."

From these quotations it is evident that the building up of a strong navy by Germany has been, in the first place, for the protection of her coasts, which it was realized were not sufficiently secured, either by the existing fortifications, or by the strategic railway lines which radiate from certain points in the country to the line which follows the coast, thus enabling the rapid concentration of land forces at any point on the coast.

In conformity with the above doctrine the German coast line is divided into only two sections: the Baltic section, of which Kiel is the base, and the North Sea section, with Wilhelmshaven as its headquarters; each is commanded by an admiral who exercises direct control over all the fixed and mobile defences contained in the whole length of his section.* Holland has also lately come round to this theory. Fearing, in the past, attacks on her coasts, she proposed to prevent them by constructing numerous coast works. And in condemnation of this method Colonel Weitzel some years ago wrote—

"The efficacy of our fortifications is exaggerated and their purpose misunderstood. What is the use of powerful fortresses if there is no army, or if one possesses such a small one that one has the certainty beforehand that it will at once all be required for garrisoning these fortresses? It is absurd, but is nevertheless what has been done: fortifications were constructed before we thought of reorganizing the army."

Admiral Morin's words must be remembered: "Only such ports as may serve as bases of operations for the fleet should be defended; as for the others, either they can be defended by the navy, or their defence is impracticable. As long as the fleet is not destroyed there will be little to fear, and if it should be annihilated, none of the suggestions which have up to the present been put forward to make up for its loss would be the least use."

* "L'Armée Allemande. Étude de organisation."

Which, therefore, are the points which from their position and nature should become the bases of operations for fleets?

In answer to this we have General Brialmont's statement: "The defence of coasts must rest principally with the navy, which one must provide with harbours as bases of operations and for shelter, which must be fortified *and safe from bombardment*." The question under consideration could not be answered more clearly or concisely. Now, as Lisbon is the only port on our coast which is *fortified and safe from bombardment*, as we have already attempted to show, it follows that it must be the only base of operations and sheltering harbour for our navy, especially as it is in a very central situation, and the most distant point of the coast is well within the radius of action which it would possess according to the theories governing the concentrated system of defence.

A navy has two distinct *rôles* to perform: one is strategical, the other tactical. The first is described by Mahan in these words: "In a naval, as in any other kind of war, two things are essential from the very commencement—a suitable base on the naval frontier from which operations can be undertaken, and an organized force, *i.e.* a fleet of the strength and nature suitable to the operations which it will have to undertake. If the war extends to one or more distant points of the globe, at each will be required secondary harbours to serve as auxiliary bases of operations for the vessels carrying on the war in those regions. Between the principals and these secondary bases safe lines of communication must naturally be secured, and which will depend upon the command of the intermediate seas. This command must be obtained by the navy, either by everywhere destroying the enemy's cruisers, and thus allow their own ships to proceed with a certain degree of safety, or by convoying the vessels which will be needed to carry on the operations at a distance."

These strategic duties, which in the present state of the art of naval war, and notwithstanding the assertions of the French *Jeune Ecole*, can only be undertaken by powerful vessels, which our damaged finances do not allow us to possess in sufficient numbers, will very naturally, in the event

of an international war, be undertaken by the British fleet, which will pursue in all seas the enemy's ships, protecting at the same time her own and our commerce, and thus assuring the relative safety of our colonies, adjacent islands, and home coasts.

It would, however, certainly be rather bold to assert that this safety would always be complete as the result of such strategic action. In spite of its temerity, it is of course possible that a fast ship, or even a small squadron, eluding the vigilance of the fleets on the high seas, might attempt an act of aggression on the Portuguese coasts. But such attempts tend more towards inconveniencing commerce, or dislocating the lines of communication which run along the coast, and the destruction of small supply stations, than to the realization of any operations of any real strategic or tactical importance.

Our own naval forces, if properly organized, ought to be sufficient to deal with any such enterprises. And for this what becomes necessary is to separate the services destined for national defence from the fiscal and colonial transport and police services, and by providing each with the requisite material for the proper performance of their missions, which are so radically distinct.

CHAPTER XXI

THE HOME NAVY AND THE COLONIAL NAVY

THE idea of separating naval defence from the fiscal, police, and transport services is not new. Great Britain heads the list of those who have done so. Every British colony has organized more or less important marine arrangements for the performance of the duties in connection with its ports and coasts, and these constitute their own private navy. The motherland allows them the greatest liberty of action in this respect, reserving her own fleet for the strategic mission, *i.e.* the command of the sea, upon which the British Empire rests.

The organization of these small navies varies according to the ideas prevalent in each self-governing colony, but all are run upon much the same principle of keeping the defence of the territory quite distinct from the police, transport, and fiscal services.

In Germany, where naval reorganization is comparatively recent, the same system is being followed. The German protectorate of the south of Zanzibar already possesses a flotilla for its own sole use, and which represents the beginning of a colonial navy, quite independent of the Imperial Navy, although the latter will also be found there to safeguard imperial interests.

In the Dutch colonies the same system exists. In their East Indian Colonies there are the following naval forces:—

(a) Vessels belonging to the Dutch Navy, but kept up at the expense of the local government, and called the “Auxiliary Division.”

- (b) Vessels built at colonial government expense, which serve permanently in the colonies, commanded by Dutch naval officers; these constitute the "Colonial Navy."
- (c) Transports commanded and manned by mercantile officers and crews, called the "Civil Colonial Navy."

All these, as well as arsenals, docks, and stores, are under the command of an admiral whose headquarters are at Batavia.

The crews of these various forces are differently constituted. Those of the "Auxiliary Division" are made up according to the system followed in the Dutch Navy; that is, they are supplied from home. Those belonging to the "Colonial Navy" are mixed: they consist of officers and men detached from the home service, and also a numerous indigenous personnel.

From these examples we see that the separation of the home and colonial navy is no fallacious idea, but one which finds special favour in other countries, and which would undoubtedly suit Portugal if properly carried out. Writing about the method which should be followed in arranging for this separation, Pereira de Mattos says: "It is clear that, in apportioning the sums of our colonial estimates, we cannot hope that any one of our colonies would be able to keep up a squadron for its defence like Australia or India.

"But we can hand over the defence of our colonial territory to forces detached from the home navy, if the latter can dispense with them, as is done by Holland, leaving to the colonies themselves their fiscal and police duties. This is undoubtedly what would suit us best.

"In this manner, working independently, the colonies can go on organizing their own fiscal services, the defence of their rivers and coasts, and transport arrangements; whilst the motherland goes on, step by step, preparing the navy for home and general defence. In this manner, although the state will continue to help the colonies in their difficult undertaking, freed from colonial responsibilities which, as

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regards the navy, handicap her efforts, she will be able to accomplish something in the way of organizing a fighting force.

"Up to the present we have had neither a home nor a colonial navy, and on the above lines we might perhaps eventually succeed in obtaining both. Let us therefore not hesitate, because if the one is necessary for the colonies' progress, the other is equally necessary for the protection of our own coasts, and for the maintenance of the command of the strategic lines of communication between Lisbon, the Azores, Madeira, Cape Verde, and Guinea. We must have an ideal, and we must start working towards it without delay, but we must keep within the limits prescribed by the financial state of the kingdom."

This proposal has been favourably received by those who are most competent to judge of its merits. The state of confusion caused by the combination of colonial police duties and home defence, to which our navy has been reduced, has been well described in some articles published in the *Novidades*, evidently written by a naval officer who, under the *nom-de-plume* "Marinheiro," disguises the name of a possessor of profound technical knowledge. Referring to the existing state of things, he says—

"Our navy at the present moment does not satisfactorily fulfil any object. It is incapable not only of repelling, but of even assisting to repel or prevent any offensive operations directed against us by even a nation to which we are nominally equal; incapable of safeguarding the colonies against anything but native disturbances; unfit to undertake privateering tactics against even the weakest of naval powers; incapable of enforcing the neutrality of our waters, and is not suitably organized to properly undertake the duties of patrolling and protecting the coasts, either at home or in the colonies."

And describing the instruction of the *personnel* in another article, says: "It is time to seriously consider the instruction and education of our officers and men. Our schools, which are practical in nothing but in name, yearly swallow up many

thousands of pounds, whilst producing very indifferent results. Their programmes are indeed imposing, full of theory and excellent rules and regulations, but as for practical instruction, which is really the most necessary, there is none.

“The word ‘gunner’ appears to me to mean one who can make good practice with a gun, but a good shot cannot be turned out by making a man *pretend* to load, aim, and fire; you cannot produce him by cramming into his head an enormous number of names of guns and their mechanism, repairs, etc., which is particularly complicated in our navy on account of the absurd variety of artillery with which it is armed—every ship has a different pattern!—you cannot produce him, however deep may be his knowledge of the ballistic attributes of powders or guns.

“No doubt theoretical training is excellent and necessary, but the most important, and above all what produces good gunners, is the experience acquired in realistic exercises carried out as nearly as possible under service conditions. Now this is precisely what we have neglected, but which we must imperatively look to in the future. Admiral Cervera, foreseeing disaster, considered that it might yet be averted if he were allowed 10,000 projectiles to expend in target practice to train his gunners, and 50,000 tons of coal for manœuvres to exercise the crews. Let us benefit by the lesson.”

Army reform will be useless as long as we do not distinguish between the policing and the defence of the colonies. As “Marinheiro” says: “One cannot order the construction of a modern man-of-war, which costs thousands of pounds, without having some definite object in view. When the plans of a ship are drawn, the purpose for which it is intended must already have been decided on, and all its characteristics shaped towards the furthering of that purpose.” This method, which is dictated by common sense, has up till now been neglected, as we find competent critics stating that our navy is unsuited to either home or colonial service. Our alliance with Great Britain has, in the author’s opinion, greatly simplified the problem for us. The strategic mission naturally falling to

that nation's powerful squadrons, our own naval forces will therefore be required to perform a purely tactical part. And for this, the progressive reorganization of our navy ought not to be too great an undertaking for the treasury, which is unfortunately the chief point to be considered. A few vessels which made up for their want of size by their speed, suitable armament, and powers of endurance, would be able to undertake, in a most advantageous manner, the defence of the coasts of Portugal. No fortifications, however powerful, would ever make up for the want of such a naval force. That distinguished naval engineer, Benedetta Brin, when he held the portfolio of Minister of Marine, informed the Italian Government that a mixed Commission, composed of military and naval officers, having been appointed to consider the most suitable composition for the fleet which it was proposed to create *for the protection of the naval frontier*, had stated, as the first result of its studies, "that whatever sums may be spent on permanent fortifications along the coast, it will always remain weak and imperfectly defended, and it is therefore necessary to ensure their proper protection by naval means, that is, by building the necessary vessels." On the other hand, a squadron, however small, composed of vessels suitable for coast defence, will give strength to the most insignificant fortifications. This is what was stated by the "Conseil superieur de la Marine" in that same country in the following words: ". . . local defence is never so safe and effective as when the means of directly assuming the offensive are added to it. In the offensive lies the secret of victory and safety; a passive defence serves but to fill the pages of history with heroic deeds, but leads in itself towards disasters and ruin. Aboukir, and the French fleet at anchor, Sebastopol, and the Russian fleet sunk, so as to block the entrance, are examples which are too recent to have been as yet forgotten. The absence of the means of offence at sea does away with the possibility of availing oneself of a series of opportunities which may present themselves of achieving magnificent results at small cost, even against superior strength; it interrupts all communication between posts,

and produces, so to speak, impotence leading up to defeat."

One could hardly put this doctrine forward in more conclusive terms. The technical authority of its propounders makes indisputable the principle that in the suitable re-organization of our navy lies the best means of defending our coasts against any attack which may be made against them.

What is to be the detailed composition of that naval force, and which the type of vessels to adopt, are questions which are too technical for one who is not competent to make suggestions on the subject. Even specialists have not been able to fully agree on that point. Admirals de Amezaga and Gavotti, for example, judging by the battles of Yalu and St. Thiago de Cuba, maintain that battleships must be very powerful and possess great speed. For purposes of coast defence they also approve of battleships, not possessing so much speed, but as heavily armoured as possible, and also torpedo craft, cruisers, etc. On the other hand, the *Jeune Ecole*, supported by Admiral Colomb's new ideas, energetically condemns large battleships. Admiral Fournier holds that the largest of them should not exceed some 8500 tons, and Guierre already prophesies that the fleets of the future will consist of armoured destroyers or torpedo-gunboats capable of steaming 33 knots, submarines, and submersible vessels.

Bonamico, however, considers that naval forces must, on account of their strategic and tactical character, be adapted to the conditions of the principal localities in which they will have to operate, and to the style of warfare in which they will have to take part. In a broad sense, however, perhaps one may expect to find the navy destined for mobile defence composed of small but powerful vessels; their number must, however, be limited by the financial circumstances of the country, they must be speedy so as to be able promptly to assume the offensive when necessary, or to avoid being forced into action against the enemy when in superior strength. The colonial navy must be adapted to the various conditions peculiar to the locality in which it is to operate; the native element must

be introduced into its crews, which will be economical and allow the Europeans to be better employed, and also reduce the number serving in unhealthy climates, as has already been done in the case of the land forces.

By reason of the undoubted tactical importance which they have acquired, and also because they are the "vessels of weak nations," as they have been called, torpedo craft certainly play an important part in navies, for it is recognized that without them it would be difficult properly to protect certain localities, safeguard coasts, and make attempts against them at night difficult and dangerous for the enemy. The importance attached nowadays in all countries to the defence of coasts by means of torpedo-boats and submarines, and above all the new manner of employing them in that important task, however, obliges us to go into rather more details concerning them, also because the question of the large radius of action or concentrated defence has to be specially considered in relation to these vessels.

CHAPTER XXII

THE DEFENCE OF COASTS BY TORPEDO-BOATS AND SUBMARINES

THE strides which are daily made in naval science have so enhanced the value of torpedo-boats and submarines, that writers of authority predict that in the near future we shall see coasts perfectly protected by them. This evolution has manifested itself very clearly since the appearance of sea-going torpedo-boats, first built at Elbing by Shickau.

There are also those who question the great importance attributed to torpedo craft, as well as to submarines, and who do not admit those advantages which their advocates claim for them; they remind one that although the torpedo is twenty-five years old, history contains but eleven examples of attacks attempted by them, of which only five produced any results, and this under abnormal circumstances.

There are also many clever writers who, though they do not place absolute faith in the future of torpedoes, yet admit further developments may justify all that is claimed for them. Amongst these we find Admiral Porter, who said: "The torpedo tends towards reducing the preponderance of powerful nations over their weaker neighbours," and Jane, who in his book, "The Torpedo-boat in Peace and War," alluding to the future action of these vessels, writes: "How will torpedo-boats act in war? To this question, which troubles many minds, only the future can supply an answer. We may conjecture, guess, or deduce from history any sort of theory, but our conclusions are in reality nothing but guesses and may be upset by facts."

One thing which the boldest prophets concerning the future of these vessels do not deny, and which is already a good deal, is that the moral effect produced by them may be just as or even more important than that produced by their strategic or tactical capabilities.* And Bonamico who, when writing his excellent work on Italy's naval defence,† did not even discuss the problem of torpedo defence, as he considered that it was not a safe or practical factor in naval action, has lately (1902) changed his views, by writing the following:‡ "Torpedo-boats as effective factors in nocturnal defence, and submarines as probable factors in coast defence by day, have completely changed the situation, and the problem (the naval defence of Italy) must once more be studied so as to arrive at an understanding in conformity with these continual changes."

Admiral Colomb, in a speech at the "Royal United Service Institution," stated that he thought armoured torpedo-boats would be the vessels of the future.

France has not hesitated in at once entrusting an important share of the defence of her coasts to torpedo-boats. The number of those vessels was increased to such an extent that the existing establishment was no longer able to supply sufficient junior officers to command them. If their number were increased, the question of promotion to the next rank, already difficult, would become very serious indeed. To meet this difficulty they have been organized since 1902, so that two torpedo-boats should always work together, forming one "section," one commanded by a subaltern officer, the other by a "premier maitre patron-pilote."

The two torpedo-boats thus linked both in peace and war would be able to "assist each other in their nocturnal vigils," in the words of the instructions issued. The homogeneous group formed by joining three "sections" of torpedo-boats of the same class constitutes a "division," which will

* Saint-Pierre, "Navi da guerra e Difesa Costiera."

† Bonamico, "La Difesa mobile Costiera."

‡ *Ibid.*

have two more vessels in reserve, and be commanded by a senior officer.

Each base or centre of a defensive section possesses a certain number of "divisions" or "sections" of torpedo-boats.

"It will be advisable," continue the instructions, "to employ in the first operations against the enemy about half of the best units available, and those commanded by the most experienced and best trained officers and crews."

Therefore, to carry this out, they are organized into two equal parts, forming "sections or divisions of the first line," and "sections or divisions of the second line." The first are always kept up at full strength, and their crews continuously under training and instruction. The second only possess crews to look after the vessels. The crews are interchanged every three months, so that the vessels may be equally used. Only after the initial operations against the enemy will the first line be reinforced by the mobilized "divisions" of the second line, and then the two will methodically co-operate in all their duties. The first line may also be called upon to assist other naval forces which happen to be operating within their radius of action. To enable the Minister of Marine to exercise constant supervision over the mobile defences, a "permanent general inspecting department" was established, at the head of which was placed Admiral Fournier, member of the Supreme Council of Navy, and a distinguished writer on naval subjects.

In studying also the organization of the naval forces of Russia, Germany, Italy, Japan, and the United States,* we may well be surprised at the large number of torpedo-boats which each of these nations already possesses, in comparison to the rest of their fleets. And that surprise will turn to consternation when we read the following words published in the journal of our senior naval corporation,† referring to our existing torpedo-boats: ". . . those which we possess can now hardly even lay claim to the

* Great Britain also possesses a large number of torpedo craft.

† Club Militar Naval.

name! They are of an antiquated pattern; they are slow, and their boilers have been condemned; they fire torpedoes of an obsolete pattern containing a very small charge of gun-cotton; nevertheless if they were looked after they might prove useful vedettes or third-class torpedo-boats, and would doubtless render good service, if only in training men." Our naval defences cannot be allowed to continue in this neglected state; a country with an extensive coast line like ours, even though not rich, must watch the evolution which is going on, and must not close its eyes to the great importance which is being attached to torpedo-boats by all naval powers, particularly in connection with coast defence.

It seems as though the promiscuous duties which these vessels have up to the present been called upon to perform, as component parts of a squadron, and as elements of coast defence, have been the chief reasons why clear and definite rules governing their employment have not been arrived at. That they may be obtained, the type of the torpedo-boat must be adapted to the special functions for which it is intended.

However, in dealing with coast defence, the torpedo-boat must be suited to the system upon which such defence is based. If it is the polycentric system, its type must be suitable for forming small flotillas, to be stationed wherever there is some interest to protect or a bay suitable for shelter, such points being usually the centres for the mobile defences. In this case the vessels need not be of a very ambitious type. If, however, the defence is based on the modern system of an extensive radius of action, the torpedo craft must also be specially adapted to it, and must in this case be rather more pretentious vessels.

The general arguments in favour of the concentrated system of defence apply equally to torpedo-boats, but there are yet some others which apply specially to the latter.

If torpedo-boats were scattered along an extensive coast line, they would nowhere be able to resist the enemy's pursuit, unless he disregarded the most elementary principles

of war, *i.e.* of successively attacking the enemy's weakest points.

The junction of the scattered groups for any combined offensive action would be most difficult to effect, even when one could place the greatest confidence in one's signalling and telegraphic arrangements.

If the localities which served as shelters for the torpedo-boats were threatened with bombardment, their inhabitants would be the first to require them, at least, to leave their shelter, and thus force them to choose between capture or almost certain disaster. As long as this danger (bombardment) were not felt, those same inhabitants would try and prevent them leaving the ports and going out to sea, as they would think that their presence ensured safety. The hydrographic characteristics of coasts are still some of the chief points to be considered when endeavouring to decide what system to adopt, and which prevent the adoption in the Mediterranean and in certain regions of the Atlantic (ours is one) of the system followed by Great Britain, Germany, France, and the United States. The former do not, like the coasts of the countries mentioned, afford sufficient facilities for shelter or secrecy to offer a torpedo flotilla good opportunities for concentration, retreat, or attack, and consequently the strategic points in them which favour the employment of torpedo defence are but few.

Bonamico recognizes that this defence "ought nowadays to be considered as an important part of the general defence, more particularly when the characteristics of the theatre of operations impose upon them an obviously important rôle, not only in their own particular sphere, but in the whole theatre of war." In this case he is of opinion that the employment of torpedo craft should not be confined to isolated and independent centres, but worked in unison with the general operations of the fleet, particularly for observation and vigilance at night. In this way the duty of the fleet which is concentrated either at its base of operations, or at some other strategic point, will be greatly simplified, and the strength of the defence thus organized will assume

such importance, "that it may be taken for granted that the enemy will disregard the coasts, so that he may concentrate all his efforts against the base of operations, for which he will have to employ most of his strength, and from which he ought to reap but little reward."

The part to be played by torpedo-boats in coast defence having thus been defined, Bonamico set about discovering what particular type of vessel would best be suited for it. The principal characteristic of the torpedo-boat is "slimness," therefore, he argued, everything which increases this characteristic helps to make them of greater utility. The chief elements (independently of those which are supplied by the nature of the theatre of operations) which are required to make up this "slimness," are invisibility, speed, and silence. The great difficulty to be overcome is the necessary combination of these requirements.

Having commenced with very small vessels of some 25 tons, we have little by little evolved a torpedo-boat of some 100 to 150 tons, which is nowadays considered the maximum tonnage they should possess, that they may carry out the tactical action which will be required of them. They have in some cases reached a tonnage of 300 tons, which increase has been necessitated on account of the exceptional nautical and tactical requirements of some localities.

In different countries, therefore, the size of torpedo-boats will be regulated by the nature and extent of the localities in which they will be required to operate. The extent of the area which these vessels can watch in one night has been fixed at 150 to 250 miles, which limits the distance which can be covered by the best of them to some 500 miles, whilst the remainder can only manage considerably less. Like other writers who have taken up the question of torpedo navigation, Bonamico considers that by adhering to the necessary nautical, handy, and generally practical characteristics of the Shickau type of vessel, and by increasing their long distance speed to, say, 25 knots, and by also making them more habitable, increasing the strength of both hull and machinery, that one ought to be able to

produce a vessel possessing the maximum defensive power with a displacement of 150 to 180 tons.

As, however, every one is agreed that the operations of torpedo-boats, especially of those with a large radius of action, must be supported in some way, which can only be obtained with some other type of vessel, which will also vary according to the importance attributed to the several *rôles* of attack, reconnoitring, and the amount of support which they must render, Bonamico suggests for this purpose the construction of a type of vessel which he calls a "scolta" * (escort, or guard), which would be larger than the modern destroyer, but with a lower free-board, lightly armoured, but at the same time retaining all the characteristics of the Shickau torpedo-boat, with which they are meant to co-operate. For the performance of the above duties Bonamico condemns the employment of destroyers, which, on account of the target they offer, the necessity of secrecy, the delicacy and weakness of their hulls and engines, do not fulfil the requirements of a vessel which is to act as a support and guide, and he also condemns torpedo despatch-boats of the *Goito* type, because it lacks every characteristic required for purposes of coast defence. He maintains that it ought to be possible to obtain a suitable type of *scout*, under 500 tons, possessing all the necessary attributes, *i.e.* speed, protection, independence, resisting power, inconspicuity, and at the same time satisfy the requirements of the defence, tactical action, and characteristics of the theatre of operations. Studying the question of the composition of torpedo flotillas destined for the defence of coasts such as the Italian, Labrés says that one *scout* or support should accompany every four to six torpedo-boats, but Bonamico considers that the type of vessel which he advocates will possess much greater power of resistance

* MacLourdy, in his book, "Des secteurs de défense mobile," also proposes a similar type of vessel, to *scout* for and support a torpedo flotilla, and which he calls "éclaireur garde-côtes." The German divisional torpedo-boats, which are meant to perform the same duties, have a displacement of 350 tons, 400 h.p., and a speed of 26 knots.

than a torpedo-boat, and consequently that it would be able to perform its duties with greater ease, and he would therefore employ one per eight torpedo-boats, but that every principal station or base of large radius of action must always possess at least two.*

In the estimates of the cost of the flotillas destined for Italy's coast defence, Bonamico reckoned the cost of the "scoltas" at about £54,000, and £24,300 as the price of the ordinary sea-going torpedo-boat.† Without these flotillas, he asserts, "it will be useless to try and protect the large cities, keep up proper vigilance in the theatre of war during night-time, and render aggressions against the coast too dangerous for the enemy to attempt them, or to enable the defending fleet to be properly utilized, instead of its being sacrificed on the altar of glory."

If the harbour of Lisbon were to be adapted as a base of operations against any attempts at landings on our coasts, we find that the most distant points on our naval frontier lie well within the radius of action which Bonamico considers ought to be attained by the type of vessel he describes.

The distance from the Tagus to the Minho is roughly 210 miles, from the Tagus to the Guadiana 185, both distances which the type of vessel alluded to would be able to cover in a few hours. One may therefore presume that no ship or group of ships would be so bold as to come and attempt anything but an operation of very secondary importance against the coasts of Portugal, when they would run the risk of being surprised during the operations either by our own naval forces or by Great Britain's squadrons.

The conditions of naval warfare have undergone great

* Pereira de Mattos adopts Montechant's opinion, which is that each group should consist of three torpedo-boats and one leader or scout. Saint-Pierre, in *La guerre in Mare*, favours groups of four, six, or eight, according to circumstances. In Germany one divisional torpedo-boat acts as scout for six to eight small torpedo-boats, and this group constitutes the unit, the "division."

† In the German estimates the cost of a sea-going torpedo-boat is put down as £20,650.

changes in the last few years and the time when the patrolling and the command of the sea was entirely in the hands of large vessels. The method of defence remains the same, but the means by which that method is solved have been specialized, and that specialization is all the more pronounced and important when the characteristics of the theatre of operations admit of it. The co-relative distinction between the various elements of naval dominion, Bonamico considers, will be much more accentuated in the future, on account of submarines, for although they may only succeed in producing an undoubted moral supremacy for their possessor by day, their co-operation with torpedo-boats "would produce in a restricted theatre of operations such a formidable combination both by day and night, that they would make the success of any attempt against the coast almost impossible."

The question of submarines is therefore one of great importance in its relation to coast defence, and consequently merits the great attention paid to it by experts, notwithstanding the incredulity with which some authorities still regard the question.

For example, in November 1899, speaking at a conference on torpedo craft in Berlin, and at which the Emperor was present, Professor Busley declared that he did not think it likely that these vessels would ever fulfil the expectations people had concerning them, the following being his reasons : their limited stability, the dangers of navigating them, their low speed and very limited radius of action, and the great expenditure which their construction and upkeep would entail. In Italy doubts were also entertained, though not of such a serious nature. In the navy estimates of 1902-3 there was one item of 800,000 liras destined for the construction of a submarine, and in the debate the Minister of Marine, Admiral Morin, was questioned on the subject, and was asked the Government's intentions as regards these vessels, also if one were deemed sufficient. He replied : "There is no doubt that a great reaction has lately been manifested by naval powers with regard to submarines ;

but they are still in what may be considered the experimental stage. Even in the navies in which some of these vessels are already included, a type possessing all the required characteristics in a practical form has not yet been discovered. Moreover, whatever progress made has been kept a profound secret by the country lucky enough to have discovered it."

The minister then stated what steps had already been taken in Italy, and explained that it was with the object of continuing these experiments that he asked for the approval of the aforementioned item, and that every care and economy would be exercised.

As a result of these remarks the following note appeared in connection with the estimates: "We cannot refrain from drawing your attention to the importance as regards defence which these vessels are likely in the near future to possess, when they attain a rather more perfect development. Some of our greatest cities, which are to-day open to the attacks of an enemy's fleet, may hope for their salvation, or at any rate to impose a certain amount of caution, by possessing a good system of submarine and torpedo defence. Anyway, we consider the question deserves careful consideration in this country, and we therefore invite the Minister of Marine to undertake that the experiments be carried out as soon as possible, in the hope that we may shortly arrive at a definite solution, which appears not to be very far off in other countries."

The latest experiments carried out in France are described in a publication of real technical value, "Engineering," and really persuade one that great strides have been made, as the following extracts will prove.

"Although the value of submarines for harbour defence was already fully admitted, yet their efficacy as weapons of attack had not, prior to the experiments which have recently been carried out at La Hogue, been definitely established. These experiments clearly prove, however, as the official account in the *Moniteur de la Flotte* says, that submarines are capable of starting from their stations without being

discovered by the vessels especially told off to watch for them and that a squadron will no longer be safe at any anchorage within the limits of their radius of action. *For a squadron to be safe nowadays, it will have to enter some enclosed harbour, whose entrance must be protected even at its greatest depth against the attack of submarines.*

“Otherwise a fleet will be obliged to put out to sea to ensure its safety by maintaining a considerable speed. The experiments proved that not only would a squadron anchored within the submarines' radius of action be in great danger, but also that it was impossible to keep a safe lookout for, or discover their approach, and that vessels at anchor could not trust to artillery for repelling their attack. From the lessons taught by the French experiments, we are forced to the conclusion that naval tactics must undergo great changes, and convinced of the great advantages possessed by submarines.”

Even if we allow for a little optimism which may slightly influence these accounts, and which is probably not very much, since they are of English origin, it is certain that the question of the employment of submarines in coast defence assumes very real importance, and this is greatly increased when we realize that France already possesses 35 submarines (1903) of various types, and that shortly she will possess 70.

Moreover, experiments carried out in England itself have not been unfavourable, as we may gather from the following extract, also from “Engineering.”

“As a result of the experiments carried out at Portsmouth, we came to the conclusion that the British vessels are able to travel at a fair speed on the surface and at a moderate speed when submerged; and by reason of the fact that they were able to manœuvre in a rough sea in the Irish Channel and return to Portsmouth, we may conclude that they are capable of manœuvring in ordinary weather. News from America says that experiments with the *Fulton* had been entirely successful, and we are convinced that our own vessels are in no way its inferiors.”

Other experiments carried out also in America with the

Adder and the *Moccassin* seem to have convinced the official commissions superintending them that those vessels were "practical and useful factors for purposes of coast defence."

The truth of these opinions is confirmed by the fact that at the end of June of last year the fifth submarine of the Holland type was launched at Barrow from the Vickers' works, and immediately afterwards the sixth, on the 8th July, the latter being somewhat larger and having various improvements. Besides these, four others were already in course of construction, and it was proposed to build three more in 1903-1904, as was announced by Lord Selborne.

But notwithstanding what has been written, the submarine can as yet only hold out rosy possibilities, to small nations especially, and they should carefully keep their eye on the progress which is made, so that they may realize the moment when these vessels should be included in and play an important part in the defence of their coasts.

In the meanwhile we ought to benefit by the improvements which have been realized in the construction of torpedo-boats, and acquire those which are considered necessary for forming the flotillas which are to be entrusted with the defence of the coasts, giving them Lisbon as a base, where also should be concentrated the naval forces responsible for the effective protection of the home shores. The rules which Bonamico laid down for Italy seem to apply equally to us—

1st. Give up the illusion of attempting to strengthen indefensible localities by erecting local defences.

2nd. Give up the system of dividing coast defence up into sections, which invites disaster.

3rd. Establish a system of defence, which shall consist of two large zones, having Lisbon for their common base.

4th. Defend the latter harbour suitably.

5th. Select a type of vessel which may be small, but must be powerful, fast, and fairly independent, and used exclusively for purposes of home defence.

6th. Select types of torpedo-boats and scouts to suit the exigencies of the two separate zones in which they are to operate.

CHAPTER XXIII

THE NAVY AND THE ARMY IN RELATION TO THE GARRISONS OF COAST DEFENCES

Now that we have outlined the part to be played by our naval forces in the problem of national defence, it is fitting that we consider another point to which great attention has been paid by the authorities in other countries possessing extensive sea-boards, on account of the acknowledged difficulties which it presents. This point is the question whether the duty of garrisoning the forts and batteries which form part of the naval defences should fall to the lot of the army or the navy.

This is a very important question. Brialmont, for example, considers the navy ought to do it, and says: * "Naval forts and batteries should be in the hands of naval officers, or of officers possessing in some particulars the same knowledge as naval men. Only such men, says Admiral Deloffre, will know when a ship appears, the spot where she will anchor, or calculate the effect of the wind and tide, and be able to say, 'This vessel can only go about at such and such a point, and in this or that manner.' Only they would know when it would be most profitable to fire either at the hull or the rigging, and how to direct their fire profitably without useless expenditure of ammunition." Another more recent authority, Admiral Hollerman, the Prussian Minister of Marine, said to the Reichstag in 1893: "For the garrisons of naval fortifications naval *personnel* is infinitely preferable to the military. The enemy who

* Brialmont, "Progrés de la Défense des États et de la fortification permanente depuis Vauban."

has to be fought is on the sea. His probable manœuvres and actions are much better known and appreciated by a naval than by a military officer.

“It is the navy, therefore, which ought to take charge of coast defences, and take upon itself that responsibility. But, as there would be drawbacks in dividing the responsibility in the general system of defence, especially in countries which have an extensive coast line, the better way would appear to be, instead of having two departments, the naval and the military, to have only one, the *National Defence Department*, which could be subdivided into three—army, navy, colonies, and by applying a special organization and composition to the coast artillery, different from the ordinary garrison artillery.” In theory the second opinion, which General Brialmont quotes for the purpose of upholding the necessity of handing over the defence of the forts and batteries along a coast to the navy, cannot be thoughtlessly applied to any country, on account of the special circumstances to which Germany has to pay attention. When the Empire was formed after the war of 1870–1871, the statesmen of that country recognized the necessity of promoting agricultural industry and commerce by means of navigation, thus freeing the nation’s enterprise from being hemmed in by the heavy duties imposed by the system of protection prevalent in neighbouring countries. With this object, therefore, it was necessary to ensure a safe outlet from those seas which wash German shores and which could easily be commanded by other nations. That was the origin, in 1873, of the birth of a powerful imperial navy and of the creation of military ports to serve as bases of operations for it, so that the events of 1848 might not be repeated, namely, when the Danish fleet blockaded the German ports, captured their merchant vessels, and paralyzed the commerce of Pomerania and Prussia, and this was repeated by the Danes in 1864 and by the French in 1870.

The organization of her fleet being comparatively recent, since it was only in 1889 that it began to be seriously undertaken on carefully thought out lines, Germany

solved the question of the garrisons of naval fortifications on what she evidently considered the soundest theoretical principles, for she had to consider neither existing interests nor traditions, and she handed over the defences of her ports to the navy. It is true, however, that the navy does not altogether approve of this.

The vocation of a naval officer, they say, rests with his ship, away from the land; there lies the important field for his efforts. It is only there that he acquires caution, boldness, rapidity of decision, acuteness of vision, coolness, and physical power. Each ship is a complicated piece of mechanism, each engine and each gun is a work of art which requires practical study. Speed has increased enormously; the time in which one has to think has proportionately decreased; it is necessary to be able to understand and act in a few seconds or minutes. It follows, therefore, that sailors must be at sea training more than ever, and that the *personnel* ashore should be reduced to a minimum.

Following this line of thought, there are many * who advocate uniting, under the same command but separate from the navy, the defences of the coasts of the Baltic and the North Sea, and garrisoning them with troops obtained by increasing the existing Marine Infantry and Artillery, and which should include all naval officers unable to go to sea on account of ill-health. This proposition need not in the least prevent intelligent and effective co-operation between the higher naval and military authorities. Fifty military officers who have gone through the "*Course superieur de Guerre*" are yearly attached to ships or to coast defences for which the navy is responsible, and in like manner naval officers are attached to the army for manœuvres, etc. In Italy General Perruchetti wished the same thing to be done, and tried to emphasize the necessity of establishing a mutual point of view between naval and military officers, not only by the study of certain subjects at the technical schools of both

* Von Stenzel, "Die Deutsche Flotte, und der Reichstag." "Ein wort zu Gunsten der Deutschen wehrkraft zur See."

services, but by means of combined manœuvres. Various exercises have been carried out on these lines in different countries. For example, by Austria in her recent exercises in disembarkation, conducted at Pola in the Adriatic, and by Germany in the manœuvres at Borkum and in the North Sea.

In France there has been much controversy over the question as to which service should be made responsible for coast defences. In 1841 a mixed Commission appointed to study this problem arrived at the following conclusions. That as the coast line formed part of the nation's frontiers the same principles and the same authorities ought to be responsible for both, and that the military department should arm and protect the coasts; that as it was expedient, from the point of view of the defence as a whole, that the two services should each take charge of those portions of the defences for which they appeared to be especially suited, the navy should, under the directions of a supreme military commander, take charge of all batteries commanding harbours, straits, or bays, provided such works did not form part of the system of defence of the fortress from the purely military or *land* point of view.

This report concluded by advising that this system should be adopted for the harbours of Cherbourg, Lorient, and Toulon, as had already been done at Brest and Rochefort. Later, in 1875, it was decided that the defences of those five harbours should be placed in the hands of naval officers, but under the direct orders of the Minister of War, the army being responsible for all other defences at various points on the coasts. Since 1876 every military officer appointed to command a coast battery has had to go through a practical course of naval gunnery at Toulon. The whole coast line was divided into five sections each under the command of a naval officer; this organization lasted till 1902, when it was reformed and the number of sections increased; to their lot now falls the duty of making certain harbours or portions of coast line safe against aggression. The mobile defences of the ports consist of the various ships especially told off

for the purpose ; of every class of torpedo craft under the orders of the naval commander of the section, etc., etc.

Up to 1902 the mobile defences of the various harbours depended directly upon the submarine defences, which were controlled by a post-captain, having under him two commanders, one of whom was in charge of the mobile and the other of the fixed defences. The submarine defences thus held a kind of intermediate office between the other two, and was the superior authority from which emanated all orders. This state of things was recognized as inconvenient, because "any intermediary between the officer responsible for the general defence and the officer in command of the vessels constituting the mobile defences is very dangerous, on account of the delays, etc., to which it may give rise." For this reason the mobile defences have now become an autonomous command directly under the naval commander of the section. The officer responsible for the submarine defences now only has under his command the officer in charge of the fixed defences.

There is in France a very pronounced tendency in favour of uniting the various branches of coast defence under naval officers, and the existing system, which is even now somewhat mixed, has been violently attacked, Lockroy, a former Minister of Marine, being amongst the foremost in advocating the system, although acknowledging that the supreme authority must of course be the Minister of War.

He states * that, whilst he was minister, Admiral Chauvin submitted to him a proposal, which had been acquiesced in by his colleague the Minister of War and received what he considers the valuable approval of General Boisdeffre, who was at the time chief of the General Staff. This proposal was, however, never carried through because in the meanwhile the opposite political party came into power.

This proposal was in line with a worthy plan of defence, which must be explained that we may appreciate its value. The number of reservists in France is greatly in excess of the numbers required when the navy mobilizes, so that when the

* E. Lockroy, "La Marine de Guerre."

fleet is placed on a war footing there are thousands of sailors available for whom there is no immediate need. "By telling off these reservists to coast batteries," said Lockroy, "forming them into companies and putting them through a certain training every year, the War Office would solve a difficult problem; mobilization would be hastened or rather simplified; prejudicial changes during the first days of the war would be avoided; the army of the Vosges would be increased by 30,000 men (because the naval reservists would replace the military along the marine frontier) and, finally, it would be employing sailors to fight sailors."

To further strengthen his case, by proving that military officers are not the best suited for dealing with the various phases of marine warfare, Lockroy cites the case of the *Augusta* which happened in 1870. France had at the period mentioned secured the undoubted command of the sea and was blockading her adversary's squadrons at Kiel, Wilhelmshaven, and other points. But the *Augusta*, a German cruiser, which had been built for privateering purposes at the time of the American Civil War, was afterwards bought by Prussia; she was faster than any of the French cruisers and thus succeeded in escaping them and got away to sea. Operating along the French coasts she was able to make many important captures amongst the merchant shipping. Her commander being obliged to rest for a while from his depredations, selected a small French bay which was defended by a duly armed and garrisoned fort, under whose batteries he spent a whole night. The next morning when he weighed anchor, he sent his card to the commander of the fort, before making for Vigo, where he meant to coal, and where he was surprised by two French cruisers who kept him shut in till peace was signed.

With this example Lockroy endeavours to prove that in most cases military officers and men neither know enough about navigation nor can they recognize vessels, and that this ignorance may easily lead to blunders similar to those which happened during the big naval manœuvres in Italy, when the shore batteries fired for some considerable time on their

own fleet, mistaking it for the enemy. And to further confirm his argument, he quotes the words of a technical authority, Admiral Reveillère—

“ When a cruiser enters any port, who can recognize her nationality, except the sailors, who are familiar with all the mysteries of her construction ? They are the only men who can tell whether she was the work of a foreign or a French shipbuilding yard. No doubt there are secret signals ; but what if the secret has been given away or discovered ? What is one to do in such a case ? Open fire ? You may perhaps be firing upon your own countrymen. Withhold your fire ? You may be permitting the enemy to enter and perhaps destroy your ships and shell your town. At the time of the Empire an unfortunate French frigate returning from the Indies, after having successfully dodged the British cruisers, was unable to regain France. Every port opened fire on her ! ”

These are the principal arguments employed in France in favour of uniting the various branches of coast defence under naval control, with the Minister of War as the supreme head, however, and which all are agreed is essential. In Italy the same important question is considered one of the problems of the day. Admiral d’Amezaga, in a series of brilliant articles in the *Riforma*, drew attention to the great dangers to which the country is exposed owing to the various preparations for war being carried on so independently by the naval and military authorities absolutely regardless of the sister-service’s aims or principles. “ To such a pitch has this gone,” says he, “ that the arms of every variety, such as rifles, guns, etc., in use in the navy are of a totally different pattern from those used by the army, and many works constructed and armed by the army for naval defence are considered quite worthless by the navy ! ” And he finishes with the words: “ The want of co-operation in preparing for war must have cost the treasury a good few millions, certainly more than would have been necessary for us to be, at the present moment, better armed and protected, if the general defence of the country had only

been placed in the hands of some single assembly or committee in which naval and military plans and principles had always been made to conform and co-operate in everything affecting the safety of the kingdom."

This sound criticism may certainly be applied to other countries also, which ought to be easily recognized by readers of this book.

In England all naval fortifications, and even fixed submarine defences, are in the hands of the army. The navy's bases of operations, such as Gibraltar, Malta, Aden, Singapore, etc., are all defended by the land service. But all the same, the question is also attracting the careful attention of specialists. Callwell, of the United States Navy, writing on the subject in a work entitled "Naval Reserves and Coast Defence," says—

"Great Britain's coast defence is the least perfect of all the great European Powers. With the command divided and non-co-operative, the absence of any written instructions relative to mutual support, and with the tremendous mixture of the naval and military services, the working of the system becomes cumbersome, is unsuited to sudden action, and possesses, moreover, the great disadvantage of employing troops outside their legitimate sphere.

"A short time ago, as a result of suggestions made by the military authorities, the question of transferring to the navy the whole system of coast defence, including mines and batteries, was discussed; the proposal was thoroughly gone into by the naval and military departments, the latter quite agreeing with the arguments favouring the change, and the former only demurring on account of the enormous administrative responsibilities already on its shoulders. Since then public opinion, cleverly led by certain general officers, has begun to clamour for a more effective defence, and it is to be hoped that the English, with that sound common-sense for which they are noted, will soon reform the existing state of things."

In confirmation of the above statement, that the public was not satisfied with things as they were, the following,

which appeared in the *Times* after the naval manœuvres in 1900, is interesting :—

“How is the defence of our coasts organized? We refer to local defences, because it was at once apparent that the military authorities failed in their part: projectors were inefficiently handled; the forts fired on their friends; the guns were not mounted in the right places, or were badly mounted.

“They require some lessons from the navy.”

From all of which we see that in every country the garrisons of coast fortifications when composed of soldiers commit the same mistakes, and that consequently in every country there are serious thoughts of handing over those duties to the navy.

Those military officers, however, who consider that the army ought to be responsible for coast defences also base their arguments upon sound ideas, which we will touch upon, the better to grasp the whole subject. They commence by saying that the question has cropped up simply because in certain countries, of which France is one, the number of naval reservists greatly exceeds what is necessary on mobilization of the fleet, and their being thus left idle when war breaks out. Were it not for this, no one would ever have dreamt of arguing that military officers should serve anywhere except on land, and sailors anywhere except on the sea. To utilize these excessive numbers, the most sensible plan is to do what has been done by France, *i.e.* organize them into special units to act as auxiliaries to the Garrison Artillery in charge of coast forts and batteries.

It must be borne in mind that naval officers only possess, so to speak, an elementary knowledge of gunnery. They only understand single gun fire, there being no object in their practising collective or battery fire. This is not surprising. A vessel's guns are scattered all over her in different places, and this makes it very difficult to group their fire.

War vessels are constructed principally for the purpose of attacking the enemy's squadrons; fire against coast

batteries is for the navy an exceptional duty. Now, in the fire of ship *versus* ship the target is always fairly close, and with the flatness of modern trajectories the more complicated methods of fire can be dispensed with, which results in their being little known in the various navies.

Besides this, naval officers are not familiar with the equipment of land batteries, which, through being much larger, contain much equipment not used on board ship, also instruments of communication and observation which are unknown afloat.

Another point is that in coast works howitzer batteries are usually to be found, and the working of these guns is absolutely unknown to naval officers.

Certainly all these points could be mastered by them, but only by going through a special training, and consequently it would be impossible to transfer them abruptly from on board ship to coast batteries without careful consideration. There are also serious objections to the transference of the naval rank and file to coast defence works. To acquire the necessary experience for the management and proper upkeep of the *matériel* on charge of coast batteries, a long apprenticeship is necessary even for officers.

This is the branch which requires the most specializing. It is calculated that you cannot turn out a good garrison gunner in less than a year, and this is the shortest time in which he can be taught his various duties so that they will not be forgotten. On the other hand, the sailor's instruction is no less complicated or difficult, and he has not even the same type of gun afloat as he will find ashore.

If we consider the ideas which have been collected and set down in the preceding pages we find that this problem, which other countries with extensive coast lines find it so difficult to solve, is for Portugal (who ought really only to have to consider the defence of Lisbon harbour) comparatively easy. By improving the practical instruction of our coast artillerymen, and by attaching to each section of coast a certain number of naval officers as advisers to their respective

commanders, we will undoubtedly do away with some of the present ills and improve the defences of our ports.

The artillery officers garrisoning coast batteries should not only attend certain courses at the Naval School of Practical Gunnery, as do their Spanish and French *confrères* at Cadiz and Toulon, but they ought also to be attached to vessels taking part in naval exercises, and in this way learn many things which are necessary for the proper performance of their own duties.

CHAPTER XXIV

CONCLUSION

THE doctrines contained in this book ought not to leave any doubts regarding the mistakes and dangers which arise if the question of national defence is viewed from a prejudiced or narrow standpoint. The only thing to do in a country which possesses a naval frontier is to face the problem of its defence boldly, with the combined assistance of army and navy. Since the criterion with respect to the defensive capabilities of fleets has, on account of the strides made in naval science, undergone so great a change, it is more than ever necessary to make the greatest efforts.

The laws of progress, however, do not always affect the realm of facts without considerable reactions taking place. Accustomed as we have been to consider fleets solely as weapons of offence, we can easily understand that technical specialists who have been accustomed to protect coasts with the means afforded by the land forces, find it difficult at once to submit to the theory of entrusting that protection to other sources which are entirely different, and of whose practical value for the purpose they have had no opportunities of judging.

In like manner, sailors who still cling to ancient theories only see in fleets implements of offence, and continue to consider fortifications as the proper defensive elements, which they would like to see at every step, that they may seek shelter under their batteries from the enemy's onslaughts.

The danger which might easily arise from this division and confusion of responsibility, with regard to the general

plan of defence, is the reason why the opinion has been expressed in some countries in favour of having only one *Minister of National Defence*, instead of the usual two, the Minister of Marine and the Minister of War.

The English, with that practical spirit peculiar to their race, however, quickly realized the drawbacks of this unification. The work which has to be done by the two departments is already so heavy and difficult that one single head would be incapable of managing the two combined. The proposed combination would therefore not solve the recognized difficulties, and would give rise to others no less grave.

In Germany we find the best solution of the difficulty. It must be through the close relations maintained between the highest naval and military authorities that combined plans for national defence can be arrived at. Everything tending towards tightening the bonds between them will be advantageous to the state.

Without that combination of ideals nothing satisfactory will ever be accomplished. There are not two strategies, one for the army and another for the navy. Let us thoroughly realize this. It is fairly obvious, from the facts discussed in this book, that in the operations which may occur in a naval war, as long as the present naval supremacy of Great Britain *

* In the debate on the Navy estimates in March, 1903, Mr. Arnold Forster said the navy had been increased by four battleships with greater speed than any existing; that three more of the most powerful type were under construction, that all old vessels were being rearmed, and that the vessels then under construction would be armed with the most perfected weapons. He added that the Mediterranean Fleet had been reinforced by two battleships, one cruiser, and one destroyer, that it was to-day a perfectly homogeneous fleet, as was also the Channel Fleet, which for the future would be known as the Home Fleet. Finally, he announced that the Admiralty proposed instituting a short service system. From the documents accompanying the estimates we also find that the Admiralty have decided to detach the W. African from the Cape station, and creating a new squadron called the South Atlantic Squadron, with Gibraltar and Sierra Leone as bases. Lastly, the organization of a new fleet is announced, called the North Sea Fleet, due to the considerable increase in the German Navy and to the defenceless state of the E. coast of England—this fleet to have a new harbour as a base of operations.

is not destroyed we need not entertain any great fears regarding naval attacks on our shores. And this security will be increased when Lisbon harbour, suitably fortified, offers a solid base of operations for our naval forces, which ought to be concentrated there, so as to be in a position to promptly beat off any aggression on our coasts of a simple tactical character. Military expeditions such as that in 1580 are nowadays no longer possible, especially whilst the British Fleet has command of the sea; if *that* is lost, the war will come to an end from that very cause, as has been proved by the history of all maritime nations. Therefore, any fortifications which we propose to construct along our coast, with the object of preventing disembarkations, would only entail a senseless expenditure of public money, without any sound military reasons to justify it.

Should the British squadrons be lured away into distant seas through strategic necessities, the energetic offensive action of our own naval forces ought to be sufficient to ensure the safety of the kingdom. On the same principle we need entertain no great fears that our coast towns will be bombarded, for the safety of such an operation is absolutely dependent upon the command of the sea resting with the aggressors. It has been proved that the effects produced by bombardment are infinitely more moral than material, and that to obtain even these moral results requires an enormous expenditure of ammunition; it is therefore unlikely that an adversary will run the risk of being surprised, either by British or our own naval forces, with his magazines half empty.

An attack on Lisbon itself (if the latter is properly protected) may be considered as most improbable, for it would be a most difficult and dangerous enterprise necessitating the command of the sea. Operations of this nature cannot be undertaken at the present day with any chance of success, unless the attacking squadron is helped either by the co-operation of a force which has been disembarked for the purpose, or unless the country is being invaded at the same time as the attempt is made, so that the fortifications may be attacked simultaneously from front and rear.

What other kind of attempts could be made against our shores? The cutting of the line of communication north of Lisbon? Who would risk their ships on such an insignificant and indecisive enterprise! With a good intelligence service our ships would be prepared to make an enemy pay dearly for making such a bold attempt.

Let us, therefore, devote whatever sums we propose to spend on coast fortifications (other than the defences of Lisbon, be it understood) on the proper reorganization of our navy; the fortifications would in any case be unable to fulfil their purpose if unassisted by the navy. Fortifications will never again be efficient substitutes for a navy for purposes of coast defence; on the contrary, it is the navy, when properly organized, which can best look after this branch of national defence. What is imperative, however, is that the reorganization of our navy should be carried out on thoroughly practical lines, consistent with our limited resources.

By separating the home from the colonial service, it will be much easier to get them both into trim and endow them with the totally distinct characteristics which each requires, and which are unfortunately not possessed by them at present.

The problem of national defence, however, takes on a different aspect when considered from the point of view of invasion from the land side. In this respect the outlook changes from its calm and clear appearance and becomes somewhat dark and threatening. The change is easily explained.

On the question of naval defence we have shown how, on the outbreak of hostilities, the valuable and strong action of our ally would at once render the mission of our own navy an auxiliary though important one. Should we be attacked over our land frontiers, however, we should have to trust solely to our own unaided exertions, at all events during the first period of hostilities. To begin with, Great Britain's system of mobilization is so slow that at least a month would elapse before she could land an expeditionary force in Portugal. That was the average time taken over mobilization, not only in 1882 when she was sending troops to Egypt, but also in 1899 when it was to her

interests to defeat the Boers with the least possible delay, and when she was therefore making every effort to despatch troops with all speed.

Unless a powerful resistance were offered close to the frontier, that one month would be ample time, considering the limited width of our country, for the invasion to prove successful. Secondly, we must realize that Great Britain cannot dream of undertaking such an expedition until she has made the over-sea line of communication with the Peninsula absolutely safe. Any naval convoy which attempted to start from that country, across the Atlantic, would have its flank threatened, as long as the French squadrons were not destroyed or blockaded in their ports of Brest, Cherbourg, Lorient, and Rochefort. To endanger or frustrate a convoy, the command of the sea is not necessary. A few fast cruisers which might escape from the blockade (should such exist) would suffice to greatly endanger the operation.

Until Great Britain has the command of the sea *absolutely* assured, she will have but one object in view, namely, to secure that command. Consequently her action, during the initial stages of land operations in the Peninsula, will probably be nil, or at any rate very insignificant. Moreover, she will hardly be able to send out more than an army corps, if the theatres of war are scattered over the whole world, as would be probable in the event of a general conflagration.*

* In the debate on the Army estimates in March, 1903, Mr. Brodrick announced the Government's intention of raising the numbers of the Regular Army to 307,000 men, of which 51,000 were destined for colonial garrisons and 120,000 in three army corps for service outside the United Kingdom in the event of war. As this proposed increase was opposed, and a reduction of the effective numbers in peace demanded, Mr. Brodrick replied as follows: "England requires at least three army corps to send abroad. The country has made clear its wishes on this subject with unsurpassed vigour, and demands a powerful army. To reduce our strength would be to make ourselves the laughing-stock of the whole world." Notwithstanding the Government's good intentions, it is still asserted in Parliament and in the press that this programme cannot be carried out, owing to the inability to keep up the effective strength. And a certain portion of the press maintains that the numbers can only be obtained by resorting to conscription.

These are the weak points of the Anglo-Portuguese Alliance from the point of view of our own immediate interests. If we can organize and strengthen our military power, so as to be able to resist the first onslaught of the enemy, and in that way secure our coast line until Great Britain is able to send out her convoys, *then* the allies' position in the Peninsula will be secured.

Every alliance possesses weak points which only become apparent from the course taken by military events. The duty of the contracting parties is therefore to endeavour to anticipate events during peace, seeking ways and means of strengthening those weak points likely to appear when war breaks out, and this they must do not only in their own interests, but from mutual moral obligation.

If we have studied history we must see that in the event of a general European conflict all the chances are that Spain will make common cause with Great Britain's enemies. That is the eventuality which threatens our land frontier, because, unfortunately, it is only on Portuguese soil that Spain can hope to successfully carry on war against England, that is, by quickly getting possession of our coast line, with the double object of occupying Lisbon harbour and of preventing the disembarkation of any expedition. Spanish generals know well enough that this plan can only be realized by a bold and energetic *coup de main* which will prevent the recurrence of the events of the beginning of last century.

England will be unable, as we have shown, to promptly send Portugal any reinforcements, and it therefore becomes a matter of life and death with us to so organize our national defences as to make the realization of the enemy's plans as difficult and as lengthy as possible, by being ready for him on our land frontier. Now, the military power of a nation consists of two different elements: the active or offensive element, which is represented by the army and the navy; and the passive or defensive element, *i.e.* the fortifications. The latter are only called upon to play their part if attacked, and this depends on the enemy; whereas

the active forces can be employed wherever circumstances require. Fortifications swallow up a considerable portion of the *personnel*, which would very often be better employed in giving effect to offensive tactics. It is armies and navies which effect conquests and which nourish and keep alive the patriotism of a nation. On the contrary it is in fortifications that troops become despondent and enervated. The safest ramparts for any nation are an army and navy imbued with a strong fighting spirit, efficient and sound training, and a firm discipline.

The real fighting strength of a nation lies in its active elements; the passive should only consist of men and resources which cannot be utilized for the active defence, and which are therefore made use of in this manner with a view to strengthening the whole system. If the nation's active forces are not equal to repelling foreign aggression, then even the most powerful fortifications will be worthless.

If, on the other hand, in the great international struggle which looms ahead, Spain elects to take Great Britain's side, or at least to remain strictly neutral, in the same way it behoves us to pay more attention to the efficiency of the army than to the construction of fortifications, because the terms of the treaty which we have made may compel our army to carry out its mission in some foreign theatre of war.

None of the official documents published in this country fully explain the terms of the contract which was recently ratified with Great Britain, but from Mr. Chamberlain's speech at the luncheon offered him by the Governor of Madeira there can be little doubt that it is of an offensive and defensive character. The British Secretary of State said—

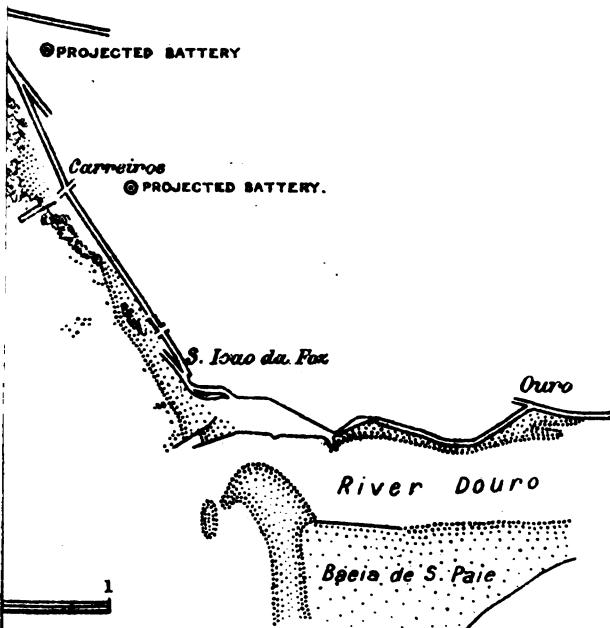
“Our two countries have for centuries been very closely associated. I think I am right in stating that the most ancient treaty lying in our archives is the first offensive and defensive alliance between Great Britain and Portugal, an alliance which, I am pleased to say, has but a few days ago been ratified.”

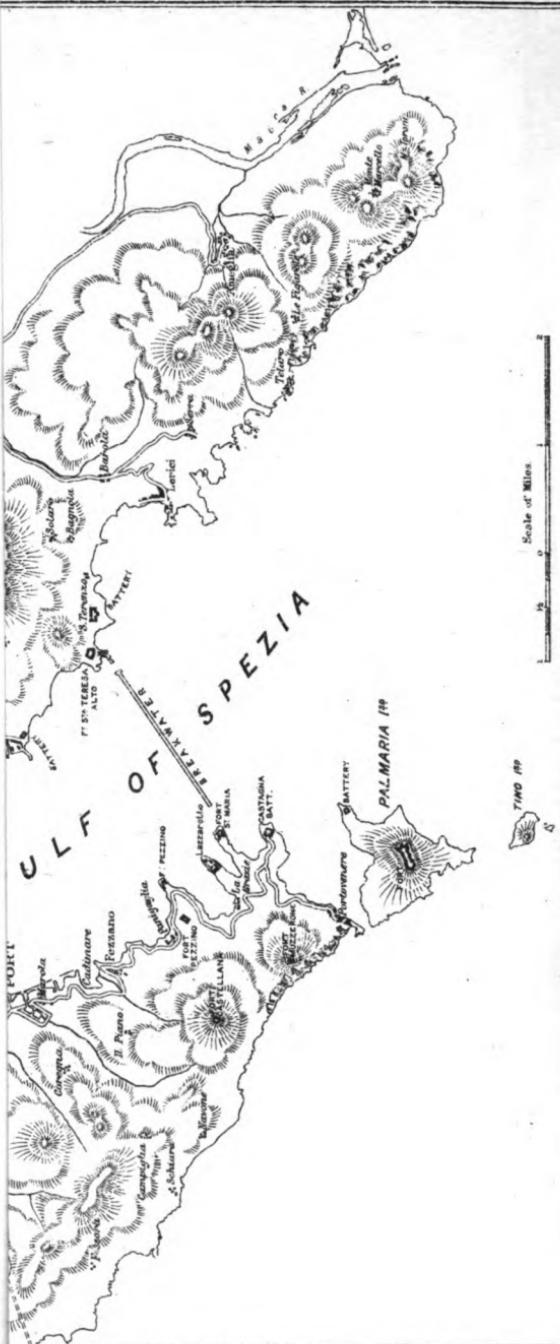
Such, then, being the state of the case, it is necessary for us to be ready to face any eventualities which may result from such a compact. And the best way to accomplish this is to remember the advice given to the Italians by the greatest general of our times, Von Moltke—

“LET US LOOK TO OUR ARMY!”

Legends

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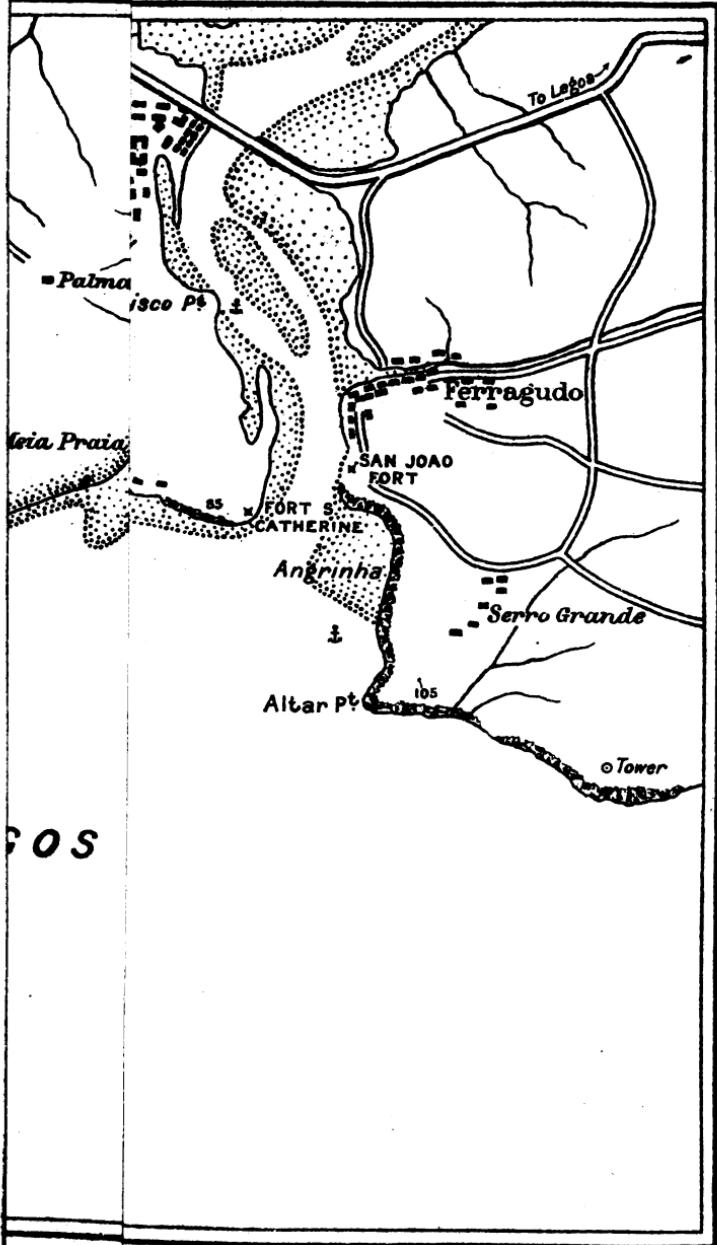




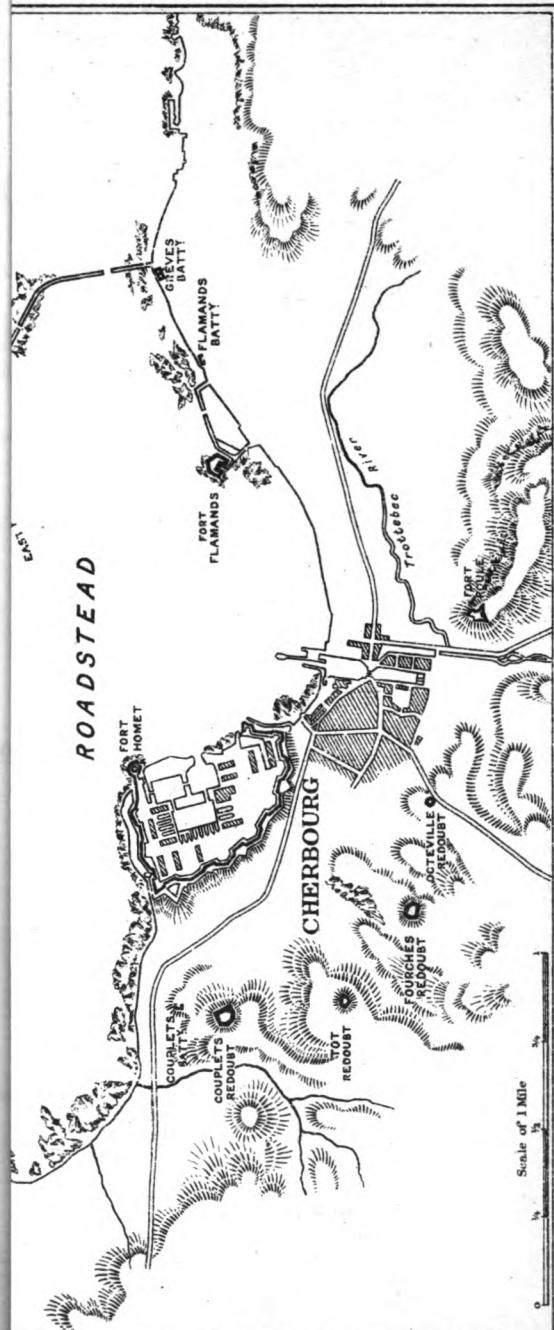


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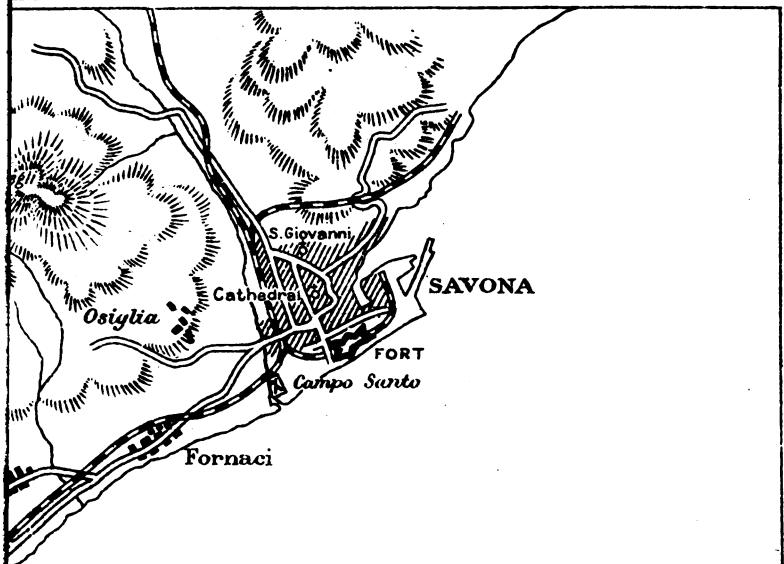
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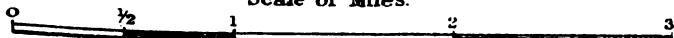
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